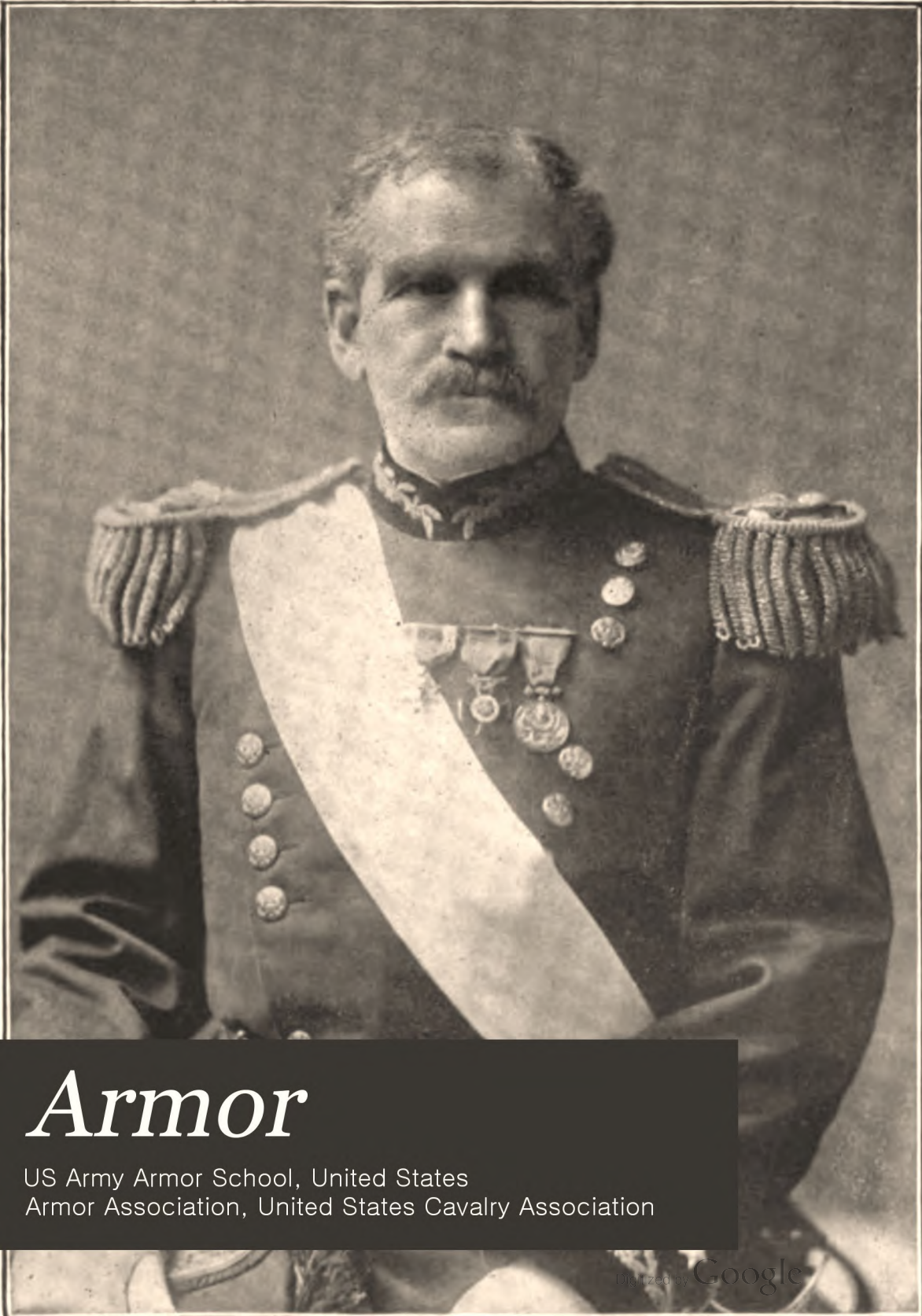

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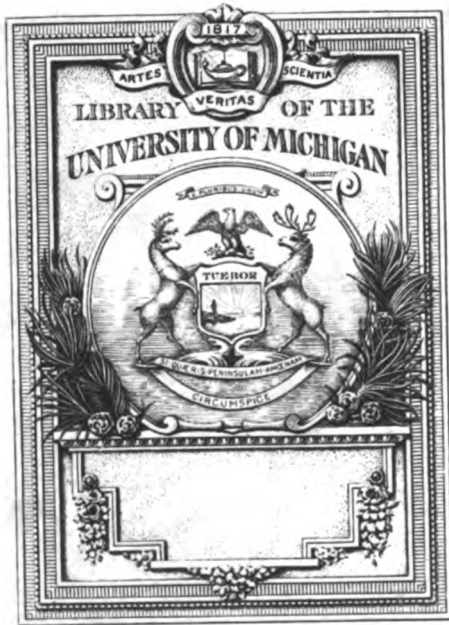
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VOLUME XV.

JULY, 1904,

TO

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LIEUTENANT GENERAL ADNA R. CHAFFEE,
UNITED STATES ARMY.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF
WASHINGTON.

Private Younger
124 Park St. Boston
has complimented me with
a letter of appreciation
and asks me to accept
his best wishes
should I go.

— Sam. J. [unclear]



WAR DEPARTMENT,
OFFICE OF THE CHIEF OF STAFF,
WASHINGTON.

Private Young Co 19
12th Pa. Vol. Infy presents
his compliments to Private
Chauffe Troop K 6th U.S. Cav.
and asks him to accept
this pair of Genl. Generals
Shoulder Straps.

Jan 9th 1904

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VOL. XV.

JULY, 1904.

No. 53.

A HURRIED GLANCE AT THE DISTRICT OF BENGUET, ITS INHABITANTS, SOURCES OF WEALTH, NECESSITIES, ETC.

BY OTTO SCHEERER, GERMAN SUBJECT.

TRANSLATED BY CAPTAIN J. T. DICKMAN, EIGHTH U. S. CAVALRY.

THE district which occupies our attention, forms the most accessible portion of that great region, which is very mountainous and therefore as yet but little explored, lying in the center of the northern portion of the Island of Luzon, commonly called "The Land of the Igorrotes," whose various tribes, well-defined among themselves by language and customs, inhabit, in a more or less savage state, the great central chain of mountains and its foot-hills, beginning in the high "South Caraballo" Mountains and terminating in Ilocos Norte. Our district occupies the southwest portion of this great territory, and its situation will be more clearly understood if we say that while the east side is bordered by valleys like that of Asin, the inhabitants of which do not permit the entrance of any traveler under penalty of being beheaded, on the south and west sides it has for neigh-



IGORROTE WOMAN. SHOWING DRESS.

(Photograph by Otto Scheerer.)



IGORROTE WOMAN OF THE POORER CLASS, SHOWING USUAL DRESS.
(Photograph by Otto Scheerer.)

bors the rich and flourishing provinces of Pangasinan and La Union.*

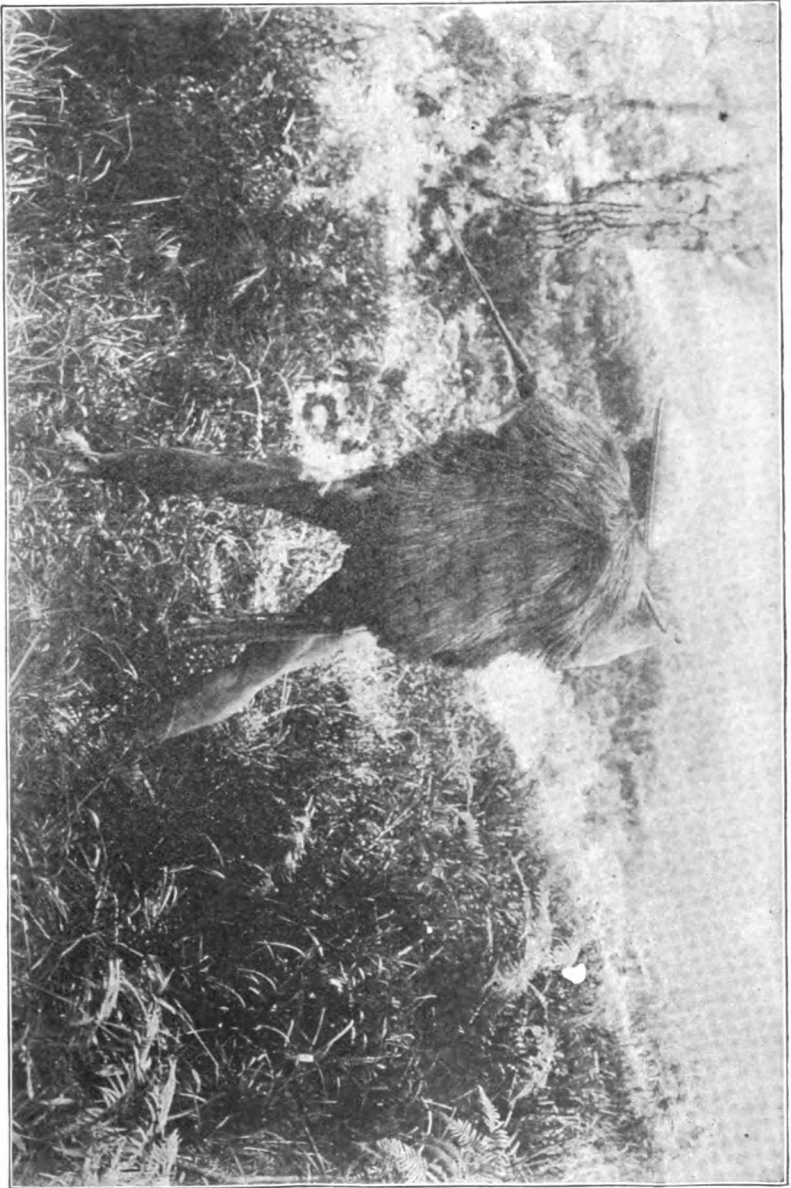
The principal means of entrance to and communication with the district is by the road which leads from San Fernando de La Union through Bauan, Naguillan and Sablan (the first Igorrote ranch) to La Trinidad, capital of the District of Benguet. There exist besides various less important communications in the way of Igorrote trails towards different points of the plain. And now that we speak of roads, let us call attention to the project of the Spaniards for the construction of a high road of gradual ascent, practically along the route above stated through Naguillian and Sablan, for, whoever may at any time have had occasion to make the journey to Benguet, will readily understand the great importance of such a work for this locality. It is true that the excessive cost of construction—estimated at some \$400,000 by the unreliable engineer in charge, for the twenty-five miles from Bauan to Baguio, with first class work—would not be justified, except from the point of view of the previous Spanish government which contemplated saving the expense of sending its military people home for recuperation by establishing a sanitarium for them in Benguet. However, as you are likely to be intimately connected with the future of the district, it is advisable not to lose sight of at least an improvement of the present road; for, in our humble opinion, Benguet is destined, on account of its natural advantages, to become the first sanitarium of the Philippines. The district was rapidly arriving at this condition before the outbreak of

*The District of Benguet is bounded on the north by the District of Lepanto, on the east by the Province of Nueva Vizcaya, on the south by the Provinces of Nueva Ecija and Pangasinan, and on the west by the Province of La Union. It is surrounded by high mountains, being separated from Nueva Vizcaya by the great central cordillera. Its shape is that of an irregular rectangle, its length from north to south about sixty miles, being twice as great as its average width. Its western boundary is parallel to the sea shore and distant about twenty miles therefrom. The southern extremity is due east of Dagupan, and the northern east of Namacpacan. The northwest corner is drained by the headwaters of the Aringay and Bauang, the remainder of the district by the Agno. The total population is estimated at less than 20,000; the capital is Trinidad, containing about 2,000 inhabitants.

J. T. D.



IGORROTE MEN AT BAGUIO, BENGUET. SHOWS USUAL COSTUME OF MEN WHEN NOT AT WORK.
(Photograph by James G. Worcester.)



IGORROTE IN RATTAN RAIN COAT.
(Photograph by Dean C. Worcester.)

bors the rich and flourishing provinces of Pangasinan and La Union.*

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J. T. D.



IGORROTE MEN AT BAGUIO, BENGUET. SHOWS USUAL COSTUME OF MEN WHEN NOT AT WORK.
(Photograph by Juan C. Worcester.)

the second revolution; rich families of the capital, such as those of Redoreda Battle, Severino R. Alberto, Hidalgo and others had begun to like Benguet. The construction of good houses on the plain was begun and its fame spread far and wide; should this drop into oblivion it would be a pity. In fact it would be advisable to collect all the plans, proposals and other data referring to the Spanish project, so as to make use of them to the extent advisable and to facilitate in every way the arrival of rich people who may desire to use this place as a resort, or who may wish to establish themselves permanently as merchants, farmers, or in other honorable occupations; but on no account should people who, possibly with some minor official position, have no other object than to fraudulently exploit the Igorrotes, thus continuing the scandalous abuses of the previous regime, be encouraged to remain. Such conduct should be closely watched and offenses punished with a firm hand, for with such examples in view, the Igorrote will either go on retiring from civilization or will imitate these vices, but will never become civilized.

The two great obstacles which have up to the present interfered with the arrival of strangers are, (1) the difficulty of transporting persons and their effects, and (2) the difficulty of procuring food during their stay in Benguet.

The question of transportation will continue to present real difficulties as long as no good highway has been constructed, for one is forced to have recourse to the most primitive means of locomotion, the muscular power of the Igorrote. This gives rise to an embarrassing situation: either we impress the Igorrote, paying him little or nothing for the painful labor of carrying up in two or three days (two days are required for the descent) some fifty pounds from the level of the sea to an altitude of 4,300 feet, or we must hire porters willing to serve. The latter are not easily found in sufficient numbers, or when available ask exorbitant prices. This matter will have to be well regulated and to the satisfaction of both parties, inaugurating at the same time a system of transportation by means of beasts of burden (probably mules), as is done in other countries, either by the government or by

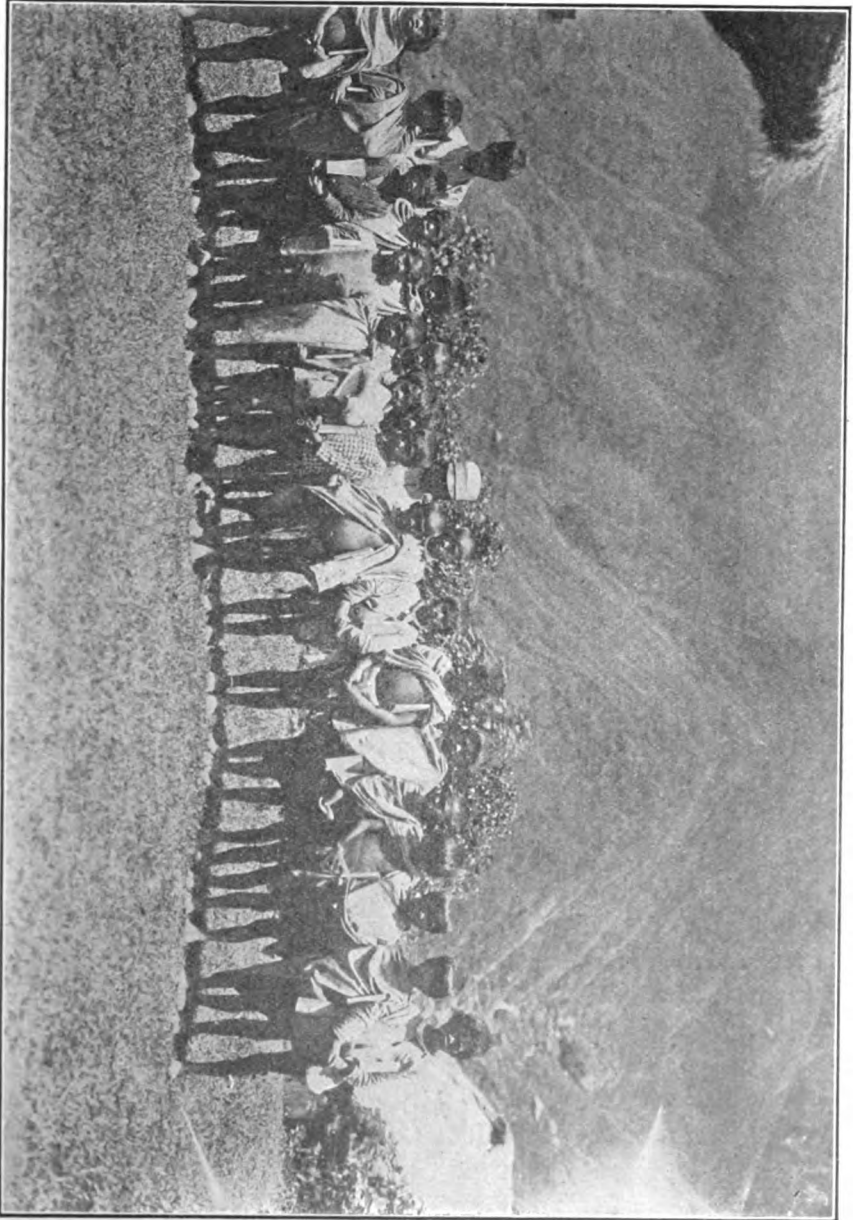


IGORROTE IN RATTAN RAIN COAT.
(Photograph by Deann C. Worcester.)

encouraging private enterprise. But to force a poor Igorrote to leave his home, his family, and his mode of subsistence at any moment of the day or the night, and to employ him for nearly a week at the hardest kind of labor, not for the good of the community, which would give him something in return, but for the exclusive benefit of some private individual who orders him to be called by means of the lash, is a bestial and barbarous state of affairs, entirely unworthy of humanity.

The second difficulty mentioned, the scarcity of eatables, exists in appearance only and is the consequence of the despotic manner of ordering supplies through the commander, the captain of the town, or the people of the courts. That this, instead of stimulating agriculture and the raising of cattle, chickens and garden truck, produces only abandonment or hiding of eatables, is so well known and will be so readily understood by the governing authorities that we need not add a single word. The Igorrotes, especially the women, are hard enough workers; they like the gain of money as well as any one else, and they know how to cultivate and produce a variety of things. Why should there not, under normal circumstances, be enough produce to supply a public market in the capital? If one has not been established before now, and if one is not provided in the future, it has been and will be the fault of the governors, not of the governed, for neither the Igorrotes nor anybody else will take his product to a public market with a prospect of being defrauded in the dealing, or of being deprived of more or less produce by deceit. After a public market shall have been established in the capital, we shall have the best means of judging the extent to which public confidence exists in the district.

Leaving the idea that the future of Benguet depends upon its being made the sanitarium of the Philippines, an idea which, after all, is the author's individual one, and therefore probably erroneous, let us investigate the other natural resources of the district. We find that the development and improvement of nearly all industries, with the exception of gold mining only, is hampered by the difficulty of transportation to the coast, without counting the prolongation of that

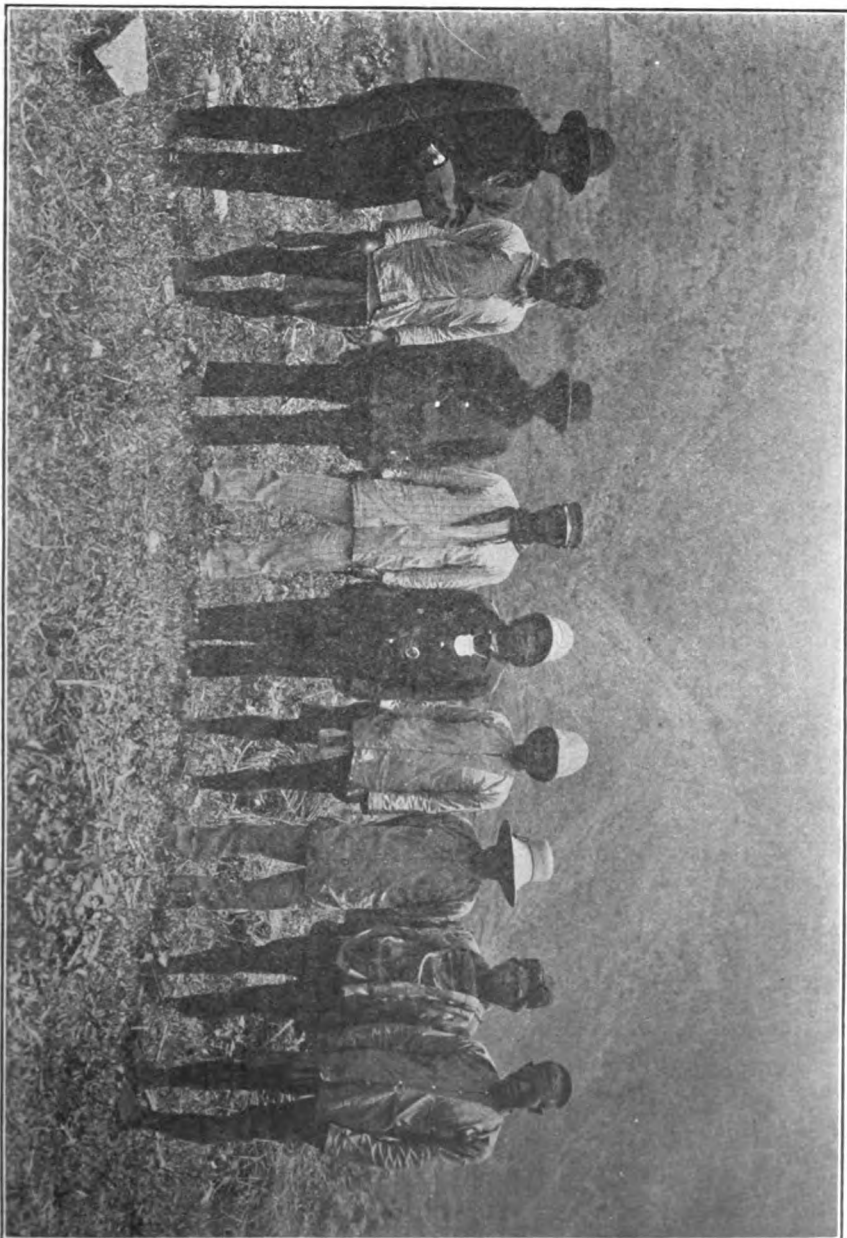


IGORROTE SCHOOLBOYS, KABAYAN, BENGUET.

abusive system which makes use of those who are falsely named "forced servers of the government." Besides rice, sweet potatoes, gabe (here called avoa) which is a sort of potato, and some other garden truck of local consumption, there are produced for export coffee, potatoes and rattan cane, the production of the first two permitting of considerable further increase. There is an abundance of pine wood, very good for carpentering, which, although now shut out from the market, would, with easy and cheap transportation, probably form a new article of export. There is not a single sawing machine in the district. In order to encourage the building of houses a good daily rent will have to be guaranteed. It is also to be remembered that pine wood is the first article in the manufacture of matches. Let us therefore protect our pine woods! The Igorrotes annually destroy many young pine trees in order to fertilize the fields and gain new pasture. It is necessary for you to harmonize the interests of the cattle raisers and of the state in this respect, for you cannot and should not be indifferent to the gradual disappearance of our forests. According to the German traveler Schadenberg, there are more to the North, Igorrote savages who plant pine trees, fully aware of their great utility.

We have mentioned cattle raisers and pasturers. Such animals as the buffalo, cow, horse and dog constitute the wealth of the Igorrotes captains, and they breed them well. During the dry season, when the grass on the plains dries up, there is always likely to be sufficient pasture of good quality in the mountains. Nevertheless, we do not notice a reduction in the price of animals; on the contrary, it appears that carabaos for example, are worth more here than further south.

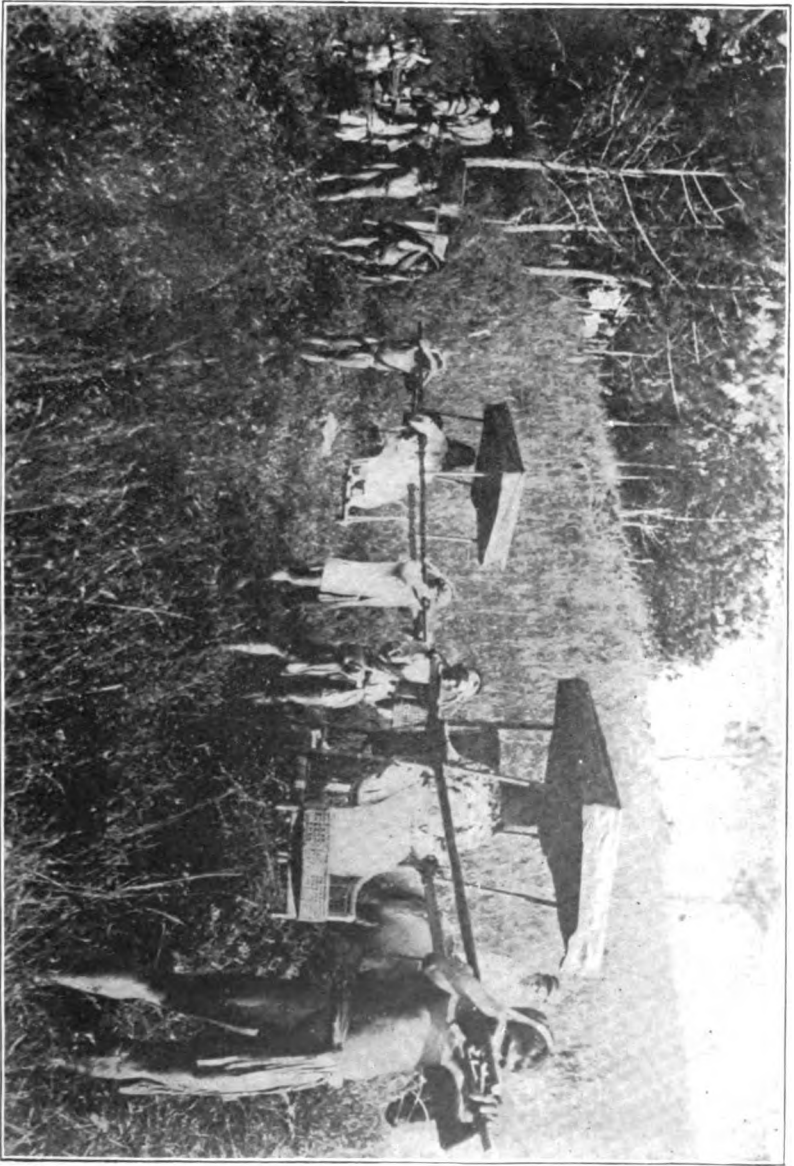
Regarding the gold mines, we are not competent to give a reliable opinion, which requires special knowledge. The experiences undergone in the Camarines show that it is necessary to proceed with caution before investing capital in enterprises of this kind. There is gold at different points in the district, but only an expert inspection can show whether it would justify operations on a large scale.



THE IGORROTE HEADMEN OF BUGIAS, BENGUET : AN IGORROTE CONSTABLE IN THE CENTER.

Let us be permitted, in conclusion, to add a few remarks with reference to the Igorrotes. We are not writing a formal study regarding anything; we merely note rapidly our opinion on the most important questions concerning this district, so as to enable you to consider the proper course to be taken in your new office. The Igorrote, on account of his timid character, is submissive and accustomed to the hard Spanish yoke, and will always be easy to govern; but our intention is not only to govern him by laws which are, so to speak, unnecessary, they governing themselves in a patriarchal manner, but to uplift him gradually on the road to civilization. We should see in him, not an inferior being because it is convenient for him to dress somewhat like the civilized Greeks and Romans of old, but rather a younger brother of ours to whom we owe protection and affection. Laying aside outward appearances and fixing our attention on their natural qualities, such as are observed in their home life, we observe that by the side of various defects due to their ignorance, they have some very fine qualities, such as their integrity, which is recognized by all and which is usually developed only to a small degree among races of simple customs and needs, or among those who live in the midst of civilization and are influenced by more diverse passions.

Among their most apparent defects is their lack of cleanliness and a certain inclination to gamble. Among their customs unworthy of respect is that of having their dead "lying in state" for some days, which may be the cause of infectious diseases. In their feasts and dances, on the other hand, I have never noticed anything worthy of condemnation, being moderate and quiet even in their occasional intoxications. We recognize two distinct tribes of Igorrotes inhabiting this district: those living in the territory extending from the center to the southern limit and who talk in "Nabiloi" dialect, and those who live in the north and on some few ranches bordering on La Union Province and talk in "Cancanay." The latter I do not know very well, but I can say that the "Cancanay" Igorrotes, as well as those living on the Buguias Ranch in the north, and those who, under the name



IGOROTE CARRIERS IN BENGUET, LUZON.
A means of transportation called "urimol" in Tagalog.

of Bagoué, form the ranches bordering on La Union Province, have the reputation in this district of being robbers.

Spanish writers who have written about Benguet mention the slavery in which the Kailianes are held by their Caciques. We have not seen anything which would deserve this designation.

It is well enough for the rich to have in their service some poor individuals who are made to work, and who receive a certain amount of pay; they are usually well suited and regarded as inferior members of the family, and their fortune is certainly more enviable than that of the poor in Europe. There is no feast in the houses of the rich without some portions of the meat being given to all; it is even sent to houses some distance away. This is a traditional custom, and certainly deserves praise. In exchange for such liberality and as an assistance on occasions of need, the poor lend gratuitous service to the rich after the manner in which the Tagalog is assisted by his neighbors when he desires to move his nipa nut to the other side of the street. Withal, there are also some cases of cruelty and abuse, as may be found in all parts of the world. As for the rest, we have had the satisfaction of hearing more than one Igorrote express the desire that his son be taught to read and write, and this will be more frequent in the future, as it is no longer necessary for him to approach the dreaded Spaniard for this instruction.

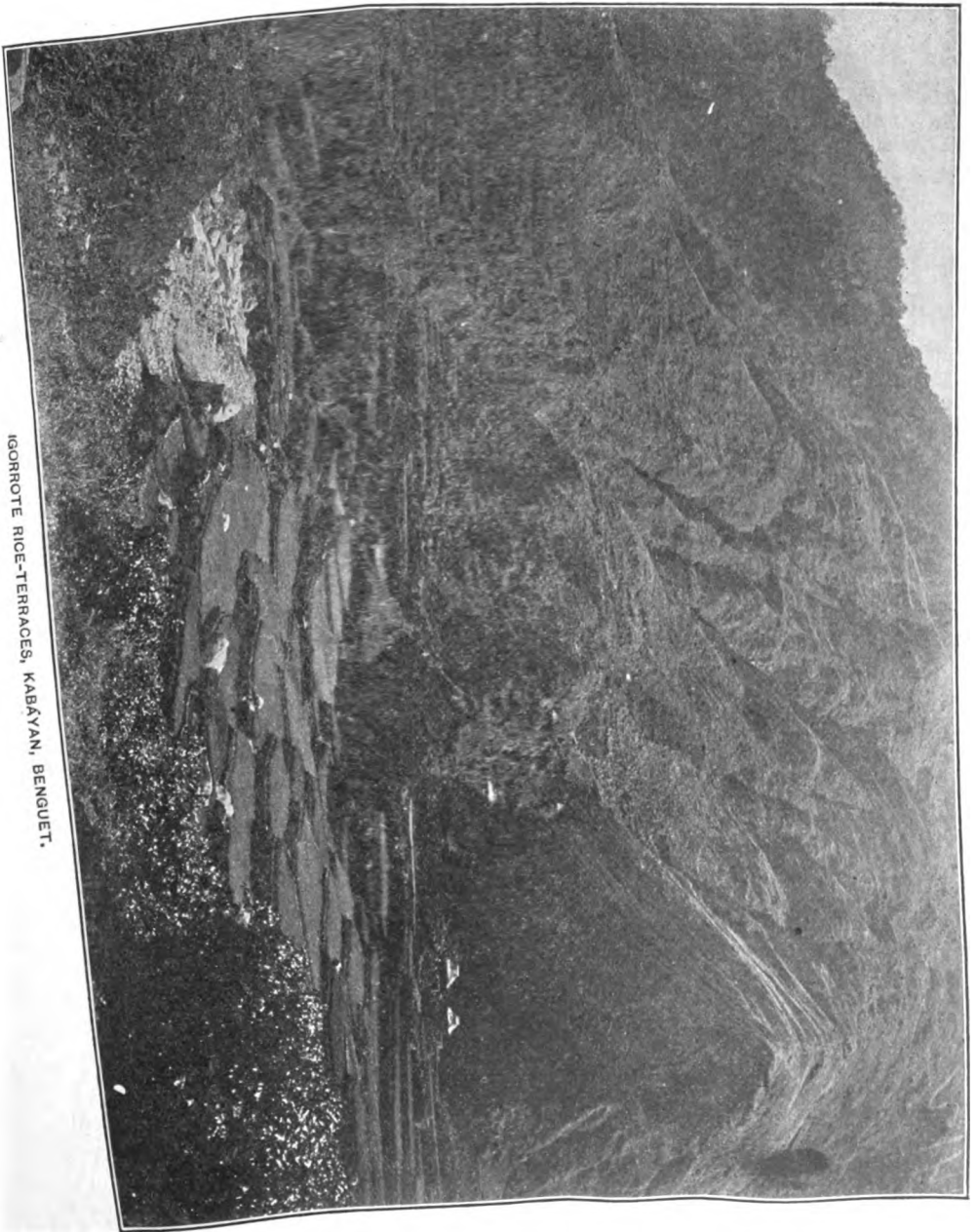
Speaking of the resources of the district, we have forgotten to mention horticulture. While praising Benguet it has always been stated that nearly all the vegetables and fruit trees of Europe are productive here; however, very little indeed has so far been done in this respect. Of the fruit trees a few samples have existed as curiosities, and of vegetables no more have been planted than are already found growing in other parts of the Philippines. There remains, therefore, a broad field for experiment, which may result in supplying our neighboring provinces with cabbage, beans, and other garden vegetables, and Manila with fruit, such as pears, apples, small oranges, etc. The small tea plant should also be grown here, but people from Japan or China would be necessary for its cultivation.



IGOROTE GIRL WITH CARRYING BASKET. THIS CHILD WAS TO BE MARRIED IN A MONTH.

(Photograph by Dean C. Worcester.)

Judging from all that has been said regarding the Igorotes, you see that it is advisable and of the greatest importance for us to win their confidence, and to make them understand the real object of the present revolution. It is very difficult for us to accomplish this, because they are naturally timid, and they are accustomed to regarding all who do not belong to their race as enemies, oppressors and prospectors. I have the profound conviction that from all that they have seen of the revolution in this district up to the present time, they have gained the impression that it did not amount to more than a mere change in persons who are to exploit them; previously they were Europeans, and now they will be Filipinos. Contributions of war, enforced service and seizure of supplies, the presence of people in uniform and with guns, and, after they have put the Spaniards to flight, certain abuses which it is better to hush up, will be inevitable consequences of each revolution; but it is highly advisable to cause them to disappear as soon as they are no longer indispensable. The confirmation by the Provisional Military Chief of the election in which the people elected their own captains, or persons of long standing confidence as their future local governors, has already made a very good impression. If in addition the position of Provincial President be given to the most noted of their race, the gain in their confidence will more than compensate for the probable lack in personal formality, because they will then begin to understand the meaning of the expression: "By the people and for the people;" while if they see these and other inferior positions held by unknown people, foreigners, or persons whose bad records are well known in the district, people whose motto is "An ebbing river, a gain in fishermen," the contrary will be the case. We destroy the initial advance to their confidence, and with this the best methods of their gradual civilization. We do not lay down our pen without giving thanks and a vote of confidence to the already mentioned Provisional Military Chief for his frank and loyal conduct, expressing the hope of seeing him return to this district with the rank he deserves



IGORROTE RICE-TERRACES, KABAYAN, BENGUET.

for his good faith, and on which we believe all would congratulate him with true pleasure.

This article was written in September, 1898, at Anbebok Farm, Town of Aguinaldo, by Mr. Otto Scheerer, for his friend Don Viscounte Quesada, Provisional Military Chief of the District of Benguet. At this time Benguet Province was under the rule of Filipinos, it being the interval between Spanish and American rule. Later, the United States army took possession of the province, and during their rule everything was quiet. This province was the first one in the Philippine Islands to have American civil rule established, a governor being appointed, who set up his headquarters at Baguio. Mr. Scheerer, the writer of the above article, was the first civil Secretary of State for the province under American rule. He did not retain this position very long.—[EDITOR.]

EVOLUTION OF THE NATIONAL GUARD*

BY MAJOR D. H. BOUGHTON, ELEVENTH CAVALRY.

IT does not require a close study of the military policies of the American people to discern that they are by tradition and custom opposed to a large standing army, and that in times of war or other emergency, when the civil government can no longer enforce the laws, they place their main reliance upon what may be broadly termed the citizen soldiery of the Republic.

Centuries of oppression suffered by their European ancestors, traceable to irresponsible power backed by the force of arms, has taught them to safeguard their liberties by limiting the size of the nation's standing army, and reserving to themselves in their sovereign capacity the right to keep and bear arms.

In the Declaration of Independence we find one of the principal complaints of the colonists against Great Britain was that the latter kept up standing armies in time of peace to overawe the people. And when that Declaration had been made a living reality by an appeal to arms extending through eight long years of suffering and death, and a strong, centralized, constitutional government had sprung from the weakness and inadequacy of the Union under the Articles of Confederation, we find the fears of the people crystallized in the second amendment to the Constitution of the new nation :

“A well regulated militia being necessary to the security of a free state, the right of the people to keep and bear arms shall not be infringed.”

This was a constitutional expression of a right which the people then enjoyed, and which they not only reserved to

*Read before officers of the National Guard of Missouri at Fort Leavenworth, Kansas, April 20, 1904.

themselves but made its abuse on the part of the new government impossible by this constitutional prohibition. So long, then, as our government is a government of, for, and by the people, so long must its ultimate reliance repose upon the intelligence, integrity, and patriotism of its citizen soldiery; and when that support shall fail, be it through commercial venality springing from selfishness and greed, or through the waning of national patriotism, then we may look to see the Union pass away.

John Quincy Adams, in his message to Congress, March 4, 1825, referred to the militia in these terms:

“The organization of the militia is yet more indispensable to the liberties of the country. It is only by an effective militia that we can, at once, enjoy the repose of peace, and bid defiance to foreign aggression; it is by the militia that we are constituted *an armed nation, standing in perpetual panoply of defense*, in the presence of all the other nations of the earth.”

Four years later, Andrew Jackson, in his inaugural message, spoke as follows:

“The bulwark of our defense is the national militia, which in the present state of our intelligence and population, must render us invincible. * * * So long as it (the Constitution) is worth defending, a patriotic militia will cover it with an impenetrable aegis. Partial injuries and occasional mortifications, we may be subjected to, *but a million of armed freemen*, possessed of the means of war, can never be conquered by a foreign foe.”

It is true that the people conferred upon the Federal government the power “to raise and support armies” distinct from those that might be formed by calling forth the militia, but they hedged it about with limitations, and their representatives have always jealously opposed any attempt to augment the standing army beyond the minimum number that to them appeared imperatively necessary. After the Revolution the regular or standing army was reduced to eighty men. At the outbreak of the Rebellion it numbered about 18,000. After the Rebellion and until the beginning of the Spanish-American War it was kept at about 25,000.

When a nation situated as is ours, beyond the danger of immediate attack, adopts a military policy to maintain but a small regular establishment, and to depend upon its citizen soldiery, either as militia or volunteers, such policy is not open to criticism. But when a nation with such a policy fails to adequately provide for organizing, arming, and disciplining its citizen soldiery in a manner making it available in times of national crises, such a policy becomes a national menace and invites the destruction of the very liberties it is supposed to maintain.

The Constitution confers upon Congress the following power in regard to the militia:*

“To provide for calling forth the militia to execute the laws of the Union, suppress insurrections, and repel invasions.”

This provision states all the purposes for which the militia may be called into the service of the Federal government, and makes it impossible for the latter to use this force as a means of conquest or domination of a foreign country. Indeed, according to the weight of authority, the President cannot constitutionally order the militia to invade foreign territory. However, as the best means of repelling an invasion may be by carrying war into the enemy's country, it is conceivable that a liberal construction of the above provision might permit the militia to be so used.

Had the Constitution stopped here it is not difficult to see that the nation in placing its reliance upon the citizen soldiery would have been leaning upon a slender reed. One hundred years of experience has amply shown that had the organization, arming, and disciplining the militia been left to the several States, some of them in all probability would now be without any organized militia at all, and others would have but indifferent forces, differently armed, organized and equipped, and with varied systems of drill regulations. It is unnecessary to comment upon the result of calling such heterogeneous forces together in defense of the Union. Nor, fortunately, was this danger unforeseen at the beginning.

*Constitution, Article I, Section 8.

Those great men whose united labors gave us the Constitution (the greatest document probably that has ever emanated from the brain of man) fully comprehended the necessities of the situation and provided for them by incorporating in the Constitution the further provision giving Congress power:*

“To provide for organizing, arming and disciplining the militia, and for governing such part of them as may be employed in the service of the United States, reserving to the States respectively the appointment of the officers, and the authority of training the militia according to the discipline prescribed by Congress.”

The provisions cited cover all the power of Congress over the militia, and when fully and intelligently exercised are ample to accomplish the purposes sought. Indeed, few people have ever realized the magnitude of the military power of the Federal government, and have supposed that it was practically limited to raising and supporting the standing, or regular army. But consider for a moment its power in regard to the militia. It can provide for organizing, arming, and disciplining this force equally in times of peace or war. This means that every able bodied male citizen of this broad land may be enrolled in the militia, and that this force may then be organized, as Congress in its wisdom may deem advisable, into infantry, cavalry, artillery, or other branches of the military service, and then armed and disciplined or trained until the whole becomes an efficient military machine, and that the revenues of the nation may be used for these purposes. The limitations are that the States must appoint the officers and train the militia according to the discipline prescribed by Congress. Armed with these powers, it becomes the duty of the Federal government to provide a national militia capable of warding off the “partial injuries and occasional mortifications” referred to by President Jackson. That it has neglected so long to do so must be attributed to a failure to fully comprehend the nature of our government and the necessities of the situation.

The first law under its militia powers was passed by Congress in 1792, but was repealed and superseded by the act of

* Constitution, Article I, Section 8.

1795. This act, however, was but a slight modification of the former, and, with few changes has remained upon the statute books for over one hundred years (having been repealed only last year), notwithstanding the fact that it has long since been obsolete and an object of ridicule to those who have seriously considered the ways and means of a nation's defense. Bearing in mind that we have experienced several wars, and have witnessed the inadequacy of the militia as a means of national defense, it will be interesting to read a section of our militia laws as they stood at the beginning of the twentieth century, when the study of war had become a science, and the nations of the world were bending their energies toward perfecting their military systems.

Section 1628, R. S. (repealed January 21, 1903):

"Every citizen shall, after notice of his enrollment, be constantly provided with a good musket or firelock of a bore sufficient for balls of the eighteenth part of a pound, a sufficient bayonet and belt, two spare flints, and a knapsack, a pouch with a box therein to contain not less than twenty-four cartridges suited to the bore of his musket or firelock, each cartridge to contain a proper quantity of powder and ball; or with a good rifle, knapsack, shot pouch and powder horn, twenty balls suited to the bore of his rifle, and a quarter of a pound of powder; and shall appear so armed, accoutred, and provided when called out to exercise or into service, except that when called out on company days to exercise only he may appear without a knapsack. And all arms, ammunition and accouterments so provided and required shall be held exempted from all suits, distress, executions or sales for debt, or for the payment of taxes. Each commissioned officer shall be armed with a sword or hanger and a spontoon."

I seriously doubt if two years ago the militia of this country carefully complied with the above law, or the officers were armed with and understood the uses of the spontoon. At any rate the existence on our statute books of a law long since obsolete and absurd, proves either that we are a non-military people, dazzled by the hallucination of a coming universal peace, or that the development of our military policies has been controlled and hampered by conflicting influences, the dominant one being the ever present fear of creating a military hierarchy.

Coupled with this fear has been the idea, long prevalent, that on account of our territorial isolation and the consequent immunity from foreign aggression, we have little need of armies or of preparations looking to their prompt mobilization. The result has been a conflict of ideas, and until within the last two years an utter inability on the part of our legislators to agree upon any scheme or system competent to render the militia a really efficient force when called into the service of the Union.

Those who have any lingering doubts in their minds in regard to this statement have only to read the military history of our country bearing upon this subject to be convinced of the accuracy of what has been said. The War of the Revolution, of 1812, our Indian wars, the war with Mexico, and the Great Civil War, all bear witness to the weakness of this support which has always been considered the mainstay of the government in times of great national emergencies, a weakness, bear in mind, resulting almost wholly from inadequate National and State laws with the consequent lack of preparation, training and discipline, and not from any inherent defects in those who compose the great body of our citizen soldiery.

When discussing matters of such grave importance we should look facts squarely in the face and seek to remedy evils known to have existed, and which will come again under like conditions and misapprehensions. The popular conception has always been that to make a soldier it was only necessary to put a uniform on a man and place a gun in his hands; or, if the weapon chanced to be a sword, the metamorphosis would produce an officer capable of caring for, controlling and leading men whom fortune had placed under his command. It is difficult to dispel popular fallacies. They become a part of the very lives of the people and sit enthroned in song and tradition while displaced reason vainly struggles to rend the veil and resume her sway over the minds of men. Experience and ridicule alone seem capable of successfully combatting a popular delusion and of arousing a people to a realization of their errors. We are all familiar with the nursery rhyme:

"Early to bed and early to rise
Makes a man healthy, wealthy and wise."

We took it in with the very air we breathed and believed it, though we often burned the midnight oil in conning the morrow's lessons, and wondered why people who retired with the birds and were up with the sun, did not accumulate more of this world's goods, and why they seemed no less free from the ills that flesh is heir to than the rest of us. We took it for granted that they were wise, for the rhyme said so. Then along came some genius with more wit than poetry in his soul and rewrote the rhyme:

"Early to rise and early to bed
Is a sure sign that a man has wheels in his head."

The illusion fell away, and we no longer saw through the glass darkly.

A hundred years of experience has been necessary to dispel the fallacies that have attended the popular conception of what constitutes a free state, and to teach the nation that armies cannot be instantly created by calling together men from their plows and workshops, and putting into their hands weapons they may have never seen before.

In the early history of our government it appears to have been the intention of Congress to entirely dispense with regularly trained troops, and to depend wholly upon militia called out as the emergency arose. At the same time it failed to provide measures for making the militia an efficient force capable of taking the field when called upon. The result has been disaster, disgrace, and an unnecessary expense of blood and treasure.

After the defeat on Long Island, August 27, 1776, Washington wrote to Congress as follows:

"Our situation is truly distressing. The check our detachment sustained on the 27th ultimo has dispirited too great a proportion of our troops and filled their minds with apprehension and despair. The militia, instead of calling forth their utmost efforts to a brave and manly opposition in order to repair our losses, are dismayed, intractable, and impatient to return. Great numbers of them have gone off—in some instances almost by whole regiments, by half ones,

and by companies at a time. This circumstance of itself, independent of others, when fronted by a well appointed enemy superior in number to our whole collected force, would be sufficiently disagreeable, but when their example has infected another part of the army, when their want of discipline and refusal of almost every kind of restraint and government have produced a like conduct but too common to the whole, and an entire disregard of that order and subordination necessary to the well doing of an army and which had been inculcated before, as well as the nature of our military establishment would admit of, our condition becomes still more alarming, and with the deepest concern I am obliged to confess my want of confidence in the generality of the troops."*

A little later he again wrote to Congress :

"To place my dependence upon militia is assuredly resting upon a broken staff. Men just dragged from the tender scenes of domestic life, unaccustomed to the din of arms, totally unacquainted with every kind of military skill (which is followed by want of confidence in themselves when opposed by troops regularly trained, disciplined, and appointed, superior in knowledge and superior in arms), are timid and ready to fly from their own shadows.

"Besides, the sudden change in their manner of living, particularly in their lodging, brings on sickness in many, impatience in all, and such an unconquerable desire for returning to their respective homes that it not only produces shameful and scandalous desertions among themselves, but infuses the like spirit in others. Again, men accustomed to unbounded freedom and no control cannot brook the restraint which is indispensably necessary to the good order and government of an army, without which licentiousness and every kind of disorder triumphantly reign. To bring men to a proper degree of subordination is not the work of a day, a month, or even a year, and unhappily for us and the cause we are engaged in, the little discipline I have been laboring to establish in the army under my immediate command is in a manner done away by having such a mixture of troops as have been called together within these few months.

"Relaxed and unfit as our rules and regulations of war are for the government of the army, the militia (those properly so called, for of these we have two sorts, the six

*Spark's Writings of Washington, Vol. 4, p. 72.

months men and those sent in as a temporary aid) do not think themselves subject to them, and therefore take liberties which the soldier is punished for. This creates jealousy, jealousy begets dissatisfaction, and this by degrees ripens into mutiny, keeping the whole army in a confused and disordered state, rendering the time of those who wish to see regularity and good order prevail more unhappy than words can describe. Besides this, such repeated changes take place that all arrangement is set at naught and the constant fluctuation of things disarranges every plan as fast as it is adopted."*

Born of bitter experience and wrung in anguish from the heart of the great commander, these words describe, as no others can, the danger and folly of relying upon untrained troops. Bravery in battle is not enough. Most men are brave, and when their timidity and nervousness are overcome by discipline and familiarity with their arms, their commander has little to fear from them when the shock of combat comes. But the trials of battle are only a fraction of those the soldier is called upon to undergo. It is in the camp, in the bivouac, and on the march that the lack of thorough training and preparation has the most deadly effect, and carries in its wake a grim but fruitful harvest of disease and death.† Is it a wonder that Washington protested against the use of untrained troops and officers? The marvel is that with his experience and that of so many others with such troops, we should have delayed a hundred years before taking adequate steps to provide an efficient National Guard. The disparity, however, between trained and untrained troops is lessened when the latter are led by an experienced officer.

The following is quoted from the memoirs of the famous Revolutionary War cavalry leader, Henry Lee; to show the value and effect in battle of trained officers in command of undisciplined troops.

It was at the battle of Camden in 1780, where General Gates with about 4,000 Continentals and militia was defeated with a loss of about 1,800 men.

*Spark's Writings of Washington, Vol. 4, p. 94.

† Out of over 223,000 volunteers raised for the Spanish-American War, 289 were killed in battle or died of wounds, while 3,848 died of disease.

The Americans were drawn up with the Continentals on the right and the militia, consisting of two brigades, on the left, supported by a small reserve. At the first onset the militia, with the exception of Dixon's North Carolina regiment, threw away their arms and fled. This regiment, supported by the reserve, not only held its ground for a time, but actually charged the enemy in their front and captured many prisoners. At the same time the Continentals on the right were steadily forcing the British from the field. In the meanwhile, however, the British right finding itself unopposed, on account of the flight of the militia, swung to the left and overlapping the weakened American line, rolled it up and the battle was over. The intrepid Baron De Kalb, who commanded the Continentals, was wounded eleven times and captured, dying shortly after. Had all the militia stood their ground as well as Dixon's regiment, the Americans would have had one less defeat to mourn.

This is what General Lee says:

"None, without violence to the claims of honor and justice, can withhold applause from Colonel Dixon and his North Carolina regiment of militia. Having their flank exposed by the flight of the other militia, they turned with disdain from the ignoble example, and fixing their eyes on the Marylanders whose left they became, determined to vie in deeds of courage with their veteran comrades. Nor did they shrink from this daring resolve. In every vicissitude of the battle this regiment held its ground, and when the reserve under Smallwood, covering our left, relieved its naked flank, forced the enemy to fall back. Colonel Dixon had seen service, having commanded a Continental regiment under Washington. By his precept and example he infused his own spirit into the breasts of his troops, who, emulating the noble ardor of their leader, demonstrated the wisdom of selecting experienced officers to command raw troops."*

Years after, General Lee, while again commenting upon the valor of this regiment, took occasion to express in no measured terms his disapprobation of a policy that sent untrained troops into battle. He said:

*Upton's Military Policy of the United States, p. 46.

"Here was a splendid instance of self-possession by a single regiment out of two brigades. Dixon had commanded a Continental regiment, and of course to his example and knowledge much is to be ascribed, yet praise is nevertheless due the troops. While I record with delight facts which maintain our native and national courage, I feel a horror lest demagogues who flourish in a representative system of government (the best, when virtue rules, the wit of man can devise) shall avail themselves of the occasional testimony to produce a great result.

"Convinced as I am that a government is the murderer of its citizens which sends them to the field uninformed and untaught, where they are to meet men of the same age and strength, mechanized by education and discipline for battle, I cannot withhold my denunciation of its wickedness and folly"*

In 1790, General Harmer was defeated in an attack upon an Indian village near the present city of Fort Wayne, Indiana. The evidence before the court of inquiry that investigated his conduct, showed that "amongst the militia were a great many hardly able to bear arms, such as old, infirm men and young boys;" also that there were many "substitutes."†

The following year General St. Clair was sent against the Indians with about 1,400 men and was defeated by a nearly equal force with a loss of 632 killed and 264 wounded. The committee of the House of Representatives appointed to investigate this disaster reported that the militia appear to have been composed principally of *substitutes*, and totally ungovernable and regardless of military duty and subordination.‡

Disaster may overtake the best trained troops, but had the militia that took part in the above mentioned engagements been trained and commanded as the experience of former wars then dictated, in all probability we would now be spared the humiliation and disgrace of these defeats.

Notwithstanding the bitter experience of the preceding thirty-six years the people still adhered to the popular de-

*Upton's Military Policy of the United States, p. 47.

†Same, p. 77.

‡Upton's Military Policy of the United States, p. 79.

lusion and the nation, at the outset of the War of 1812, found itself wholly unprepared for the coming conflict. The regular army was small and poorly organized, while the militia was such in name only. In enthusiasm the people were not wanting. The cry was, "On to Canada!" as at the beginning of the Civil War it was, "On to Richmond!"

Defeats, disasters, wholesale desertions, insubordination, mutinies, incompetent officers, political jealousies, refusal of states to furnish militia when called upon, and of the latter to cross the frontier, though their comrades were engaged in unequal battle on the other side, national humiliation and disgrace. And these were Americans imbued with the same spirit of patriotism and love of country that actuate us to-day.

The dark record is not flattering to our national vanity, and our historians, after dwelling upon the one or two land victories that are really creditable to us, turn with relief to the sea, where our brilliant naval operations electrified the world. Yet a study of the campaigns of this war, ending though the majority did in humiliating disaster to our arms, furnishes some of the most instructive lessons in our nation's history. General Lee said that a government that sent un-informed and untaught soldiers into the field was a murderer of its citizens. Read carefully the history of this war and see if he is not right.

The government, however, learned little, or what it did learn was soon forgotten, for we find that when General Taylor, in 1845, was sent to the lower Rio Grande with a small force of regulars to oppose any attempt on the part of Mexico to invade the State of Texas, he was instructed, should his own force prove inadequate, to call upon the governors of the nearest States to furnish contingents of militia. This meant the use of untrained troops again, for neither Congress nor the States had at that time taken suitable measures to place the militia on an efficient basis. But circumstances, which marked the introduction of a new feature into our military policy, rendered this step unnecessary. This was the use of volunteers, a measure growing out of the fact that Congress could not call forth the militia to invade a for-

eign country, and was therefore compelled to raise armies under its general power "to raise and support armies."

But it matters not by what name troops are designated, be it militia, volunteers or regulars, their efficiency and usefulness will be measured, other things being equal, by the amount of military education and training they may have received.

According to all the laws of logic and experience this statement should be axiomatic. Unfortunately to our people, it is not; but to make it as obvious as possible and to emphasize it by lessons drawn from our own experience has been, and is, one object of this paper. We could continue citing instances until this lecture grew into a volume, and the volume into a library. Our annals are replete with lessons striking enough to convince the most skeptical—lessons not confined to the early history of our country, but extending down to the Spanish-American War, where the lack of preparation was so glaring as to arrest the attention of the most casual observer. But enough has been said to show a nation must have some definite military policy, and, no matter what that policy is, one feature must be that *the government should not send into the field inefficient or untrained soldiers.*

We have referred to the inadequacy of our national military laws as they existed from 1792 to 1903. Let us now turn to a brief consideration of the Act of Congress, approved January 21, 1903, which act was passed not only to promote the efficiency of the militia, but with the additional object of somewhat definitely shaping our military policy for the future. As this act is of great importance, we shall take it up section by section, with such comments as appear necessary to a proper understanding and appreciation of the whole. The first section, defining the word "militia" and legally authorizing the use of the term "National Guard," is quoted in full, as are also certain others:

"SECTION 1. That the militia shall consist of every able bodied male citizen of the respective States, Territories and the District of Columbia, and every able bodied male of foreign birth who has declared his intention to become a citizen, who is more than eighteen and less than forty-five years

of age, and shall be divided into two classes: The organized militia, to be known as the National Guard of the State, Territory, or District of Columbia, or by such other designations as may be given them by the laws of the respective States or Territories, and the remainder to be known as the Reserve Militia."

SEC. 2. This section exempts certain persons and classes of persons from militia duty, recognizes that the States and Territories may make further exemptions, and provides that no member of any well recognized religious sect whose creed forbids war shall be required to serve in the militia or any other armed or volunteer force under the jurisdiction and authority of the United States.

"SEC. 3. That the regularly enlisted, organized and uniformed active militia in the several States and Territories and the District of Columbia who have heretofore participated or shall hereafter participate in the apportionment of the annual appropriation provided by Section 1661 of the Revised Statutes of the United States, as amended, whether known as National Guard, militia, or otherwise, shall constitute the organized militia. The organization, armament and discipline of the organized militia of the several States and Territories and in the District of Columbia shall be the same as that which is now or may hereafter be prescribed for the regular and volunteer armies of the United States, within five years from the date of the approval of this act: *Provided*, That the President of the United States, in time of peace, may by order fix the minimum number of enlisted men in each company, troop, battery, signal corps, engineer corps, and hospital corps."

An additional proviso to this section allows certain military organizations that have been in existence since 1792 to retain their accustomed privileges. Section 1661, Revised Statutes, referred to herein, is an act of Congress making an annual appropriation of one million dollars for the purpose of providing for issue to the organized militia any stores, supplies, or publications which are issued by the War Department to the regular army. This amount is apportioned among the States according to the number of Senators and Representatives to which each is entitled, a just proportion

going to the Territories and District of Columbia under regulations prescribed by the President.

As can readily be seen, this section of the militia act defines the "organized militia," and secures uniformity in organization, armament and discipline throughout the armies of the United States whether composed of militia, volunteers or regulars. The necessity for this wise provision is apparent.

"SEC. 4. That whenever the United States is invaded, or in danger of invasion from any foreign nation, or of rebellion against the authority of the government of the United States, or the President is unable, with the forces at his command, to execute the laws of the Union in any part thereof, it shall be lawful for the President to call forth, for a period not exceeding nine months, such number of the militia of the State or of the States or Territories or of the District of Columbia as he may deem necessary to repel such invasion, suppress such rebellion, or to enable him to execute the laws, and to issue his orders for that purpose to such officers of the militia as he may think proper."

The provisions of this section are plain and confer upon the President the power to call out the militia when the emergencies enumerated in the Constitution arise. Formerly it was maintained that in calling out the militia the President should address his order or requisition to the governor of the State, but this view was overturned in the case of *Houston v. Moore** where the law was the same as it is now. In this case the Supreme Court ruled that "the President's orders may be given to the chief executive magistrate of the State, or to any militia officer he may think proper."

The President may authorize the Governor to designate the particular militia to be included in the call, and in all probability this would be the method generally adopted.

"SEC. 5. That whenever the President calls forth the militia of any State or Territory or of the District of Columbia to be employed in the service of the United States, he may specify in his call the period for which such service is required, not exceeding nine months, and the militia so

* 5 Wheaton, 1.

called shall continue to serve during the term so specified, unless sooner discharged by order of the President.

"SEC. 6. That when the militia of more than one State is called into the actual service of the United States by the President he may, in his discretion, apportion them among such States or Territories or to the District of Columbia, according to representative population.

"SEC. 7. That every officer and enlisted man of the militia who shall be called forth in the manner hereinbefore prescribed and shall be found fit for military service, shall be mustered or accepted into the United States by a duly authorized mustering officer of the United States: *Provided, however,* That any officer or enlisted man of the militia who shall refuse or neglect to present himself to such mustering officer upon being called forth as herein prescribed, shall be subject to trial by court martial, and shall be punished as such court-martial may direct."

Until called into the service of the Union the militia is a State force under the Governor, who is its commander-in-chief. It is then subject to such military law as the State may provide. State laws, however, must in no way contravene the paramount laws of Congress enacted under its constitutional power to provide for organizing, arming and disciplining the militia.

But an enlistment in the army does not operate as a discharge from the organized militia or National Guard, and a member of the National Guard in his State who enlists in the regular army repudiates his engagement in said State troops, and by so doing becomes and remains liable to such penalties as may be authorized by the laws of the State in whose military service he has been enlisted.*

The President is by the Constitution commander-in-chief of the militia when the latter is called into the service of the Union.

The word "discipline," as used in the Constitution, has reference to the drill and training necessary in the education of the soldier, and not to "military discipline," as that term is now used.

*Circular 13, A. G. O., 1903. National Guardsmen applying for enlistment in the army are required to present evidence showing discharge from the State or Territorial forces.

"SEC. 8. That courts-martial for the trial of officers or men of the militia, when in the service of the United States, shall be composed of militia officers only.

"SEC. 9. That the militia, when called into the actual service of the United States, shall be subject to the same rules and articles of war as the regular troops of the United States."

With the single exception, therefore, that courts-martial for their trial must be composed of militia officers only, members of the National Guard, when called into the service of the Union, are subject to the same military law that governs the regular forces.

SECS. 10 and 11. These sections provide that the pay and allowances of the militia, when called into the actual service of the Union, shall be the same as those for the regular army, and shall commence on the day of their appearing at the place of company rendezvous.

SEC. 12. This section provides for the appointment of an adjutant general of each State, etc., who, in addition to the usual duties of such officer, will make returns and reports concerning the militia to the Secretary of War. Abstracts of these returns and reports will be transmitted to Congress by the Secretary with his annual report.

SEC. 13. This section provides for the issue, at the national expense, of such number of United States standard service magazine arms, accoutrements and equipments as may be necessary to arm all the organized militia of the United States. It also provides for the exchange of old ammunition for new, the turning in of old arms to the Ordnance Department, and requires the Governors of States and Territories to make annual returns for the property received under this section.

This provision enables the States and Territories, without expense to themselves, to at once arm and equip their National Guard the same as the regular forces are armed and equipped, and renders possible the immediate coöperation of the two forces when the former are called into the service of the Union.

SEC. 14. This section provides for an annual inspection of the National Guard by an officer detailed by the Secretary of War, and when the report of such inspection shows the National Guard of any State, Territory or of the District of Columbia is sufficiently armed, uniformed and equipped for field service, it authorizes the Secretary of War to turn over to such State, etc., so much of its allotment made under Section 1661, Revised Statutes, as shall be necessary for the payment, subsistence and transportation of such portion of the organized militia as shall engage in actual field or camp service for instruction. The pay and allowances in such cases are the same as those of regular soldiers under like conditions.

This provision enables field and camp instruction to be given to at least a part of the National Guard of each State every year, provided the State officials take steps to properly arm, uniform and equip it for field duty.*

SEC. 15. This section provides for participation of the National Guard in the field maneuvers and encampments of the regular army. In this case, the pay, subsistence and transportation of the militia so participating are the same as those provided for the regular army under like conditions, and are defrayed from the appropriation for the pay, subsistence and transportation of the army. The wisdom of this provision is apparent and needs no comment.

SEC. 16. This section provides that when an officer of the organized militia pursues a regular course of study at any military school or college of the United States, such officer shall receive from the annual appropriation for the support of the army the same travel allowances and quarters or commutation of quarters, that a regular army officer would if attending the school or college, and also commutation of subsistence at the rate of one dollar a day while in actual attendance.

Under existing orders the officers' school at posts, the special service schools, and the General Service and Staff College at this place are open for instruction to officers of

*Circular No. 9, War Department, 1903.

the National Guard, *i. e.*, to officers of the organized militia. But to entitle them to receive the allowances prescribed in this section, their attendance at the school or college must be authorized by the President on the recommendation of the governor of the State, Territory, or the commanding general of the District of Columbia, as the case may be.

The War Department is now preparing suitable regulations for a general system of progressive instruction for officers beginning with the officers' schools at posts and ending with the War College. These regulations will undoubtedly prescribe the qualifications necessary for admission to the more advanced schools, and should be consulted by officers of the National Guard who contemplate taking a course of instruction.*

SEC. 17. This section broadens the provisions of Section 1661, Revised Statutes, so as to make the money therein annually appropriated available for the purpose of providing for issue to the organized militia *any* stores and supplies or publications furnished the army. It also authorizes the States, Territories and District of Columbia, with the approval of the Secretary of War, to purchase from the War Department like property for cash, with cost of transportation added.

SEC. 18. This section provides that each State or Territory receiving aid from the Federal government under this or former acts shall, during the year next preceding the annual allotment of funds, require each company, troop or battery of the National Guard not excused by the governor to participate in at least five days instruction in camping or practice marches, to assemble for drill or target practice not less than twenty-four times, and to be inspected by an officer of the National Guard or of the regular army.

SEC. 19. This section provides for the detail of one or more officers of the army on the application of the Governor of a State or Territory, to attend encampments of the Na-

*See also Circular 24, War Department, 1903. Mileage is paid at the rate of seven cents a mile over the shortest usually traveled route. Commutation of quarters amounts to \$24.00 for a lieutenant, \$36.00 for a captain, and \$48.00 for a major.

tional Guard, and to give instruction as may be requested by the Governor. The officer or officers detailed make reports to the Secretary of War, and the latter furnishes a copy to the Governor.

SEC. 20. This section provides for the detail of one or more army officers, on the application of a Governor of a State or Territory, to report for duty to the Governor in connection with the organized militia. Such details may be revoked at the request of the Governor or at the pleasure of the Secretary of War.

SEC. 21. This section authorizes the issue of ammunition for target practice to the militia when encamped at any military post or camp. The instruction, however, must be carried on under the direction of some officer detailed by the proper military commander.

SEC. 22. This section extends the benefits of the pension laws to the militia when they have been called into the service of the United States, and to their widows and children.

SEC. 23. The object of this section is to ascertain the names of specially qualified persons who will be available for appointment as officers in any volunteer forces other than those composed of organized militia, that may be raised by the Federal government in future years. A list of such persons is to be formed and kept on file at the War Department, the test of availability being examinations by boards of officers convened by the Secretary of War at the various army posts throughout the United States.

Applicants, besides possessing the attainments necessary to pass such examinations, must have served in the regular or volunteer army, or in the organized militia, or, being a citizen of the United States, he must have attended and pursued a regular course of instruction in any military school or college of the United States, or have graduated from some educational institution to which an army or navy officer has been detailed as superintendent or professor pursuant to law, after having creditably pursued the course of military instruction therein provided. In addition, successful applicants before being commissioned must pass a physical examination.

Those who have successfully passed this examination may be authorized by the President to attend any military school or college of the United States other than the Military Academy, and to receive from the annual appropriations for the support of the army the various allowances and commutations provided in this act for the organized militia.

This section may stimulate to some extent an interest in military matters throughout the country, but the benefits promised are too remote and uncertain to arouse any great enthusiasm. In the first place there is no surety that volunteers will ever be called out during the active lifetime of any person who would like to see his name enrolled on this waiting list, and in the second he has no absolute guarantee that he will be commissioned even when such forces are called out. Political exigencies may interfere.

Moreover, these uncertainties are increased by the progressive age limits which the act imposes upon the granting of commissions, limitations that would be valuable if applied to the regular army, but are of doubtful utility in volunteer forces that are called out for short periods of service only—two years at most as the law now stands.

To receive a commission as second lieutenant under this section a person must not be over thirty years of age; first lieutenant not over thirty-five; captain not over forty; major not over forty-five; lieutenant colonel not over fifty, and colonel not over fifty-five. Nor can they be commissioned in any National Guard organization that volunteers for service in a body.

The War Department has already issued regulations for carrying the provisions of this section into effect. These regulations set forth the necessary qualifications which the applicant must possess, the scope and character of the examinations for officers of different grades, arms of service, or corps, and contain a form which applicants must follow in applying for examination.*

SEC. 24. This section provides that the volunteer forces called out in future by the Federal government shall, sub-

*General Orders No. 6, War Department, 1904.

ject to the preceding section, be organized in accordance with the law approved April 22, 1898. This was the act creating the volunteer army at the outbreak of the Spanish-American War, and authorized, it will be remembered, the volunteering of organized militia in bodies. With the National Guard organized, armed, equipped, and disciplined the same as the regular army, which this act now requires, the raising of volunteers in the future will be a comparatively easy matter, and will not be attended with all the confusion and ill results that followed the calling out of these forces in 1898.

SEC. 25. This section repeals the century-old militia laws that have encumbered our statute books so long and rendered any real efficiency in that branch of our national forces well nigh impossible. In laying them aside, however, we should remember that they are a part of our history, and unite us with the long forgotten past, when our great-grandfathers in colonial times marched with the "train bands," and on training days turned out in their best attire to indulge their vanities in military pomp and display, and thus kept alive the military spirit that animated the Minute Men of 1776, and which still lives in the patriotism and valor of the National Guard to-day. But they have served their usefulness, and, like all human institutions subject to the eternal changes that mark a nation's progress, have passed away to give place, let us hope, to laws more in consonance with our present needs.

This completes the review of the new militia act, commonly known as the Dick bill, from the name of the gentleman who assisted in framing it, and who was instrumental in securing its adoption. It had its origin in an agreement between the War Department, representing the regular army, and the National Guard of the States, represented by a convention that met in Washington in 1902, in regard to provisions that were necessary to give vitality and effectiveness to our militia system.* This agreement was presented to Congress and resulted in the drafting of a bill which, with some changes, was finally enacted into the present law.

* Report of the Secretary of War, 1903, p. 338.

The necessity for some such provision has long been apparent, and was recognized as early as the time of President Jefferson, who recommended the separation of the militia into active and reserve forces. But the Federal government has never provided for a really organized militia until the adoption of this bill. It is true that what was termed the National Guard had existed before, but only as a creation of the States and to be used primarily as State forces. Under these conditions uniformity could not exist, nor could be expected where each State was proceeding upon its own lines and with little conformity to progressive military standards.

Now, however, the National Guard has a national status and becomes a recognized national force. It receives aid from the Federal government, conforms to army standards, and when called out will form with the regular army one homogeneous force. In its enlarged sphere its importance cannot be overestimated.

But this act is not limited to its effect upon the National Guard, and while it energizes that force, gives it a national habitation and a name, and provides means for placing it on an efficient basis, it also crystallizes our heretofore nebulous and unformed military policy into definite shape. The parts to be played by the various actors have been mapped out, and with the energy and enterprise that characterize the American people we may hope to see at no distant day our military forces so organized, armed, equipped, and disciplined that the nation will ever have ready at its command an army of freemen—the dream of former days—capable of defending its honor, its flag and the liberties of its people.

In brief this policy may be outlined as follows:

First. For all ordinary emergencies and needs of the government where military force is required, a small but highly efficient regular army.

Second. For greater emergencies where an additional force is required to suppress insurrection, repel invasion, or to execute the laws, the regular army to be supported by a well trained National Guard similarly organized, armed, equipped and disciplined.

Third. For still greater emergencies, or for foreign service, or when the call is for a longer period than nine months, dependence must be had on volunteers. In this case the organized militia will probably not be called out as such, but will enter the armies in organized bodies as volunteers, which the law now authorizes.

Our regular army in time of war, or when war is threatened, may be increased to 100,000 men. The organized militia or National Guard now number 116,000 men, and are increasing. In war, then, the nation will have an organized force of over 200,000 men available for immediate action. Behind these stand the millions of reserve militia, many of whom will have served in the regular army, the National Guard, or been instructed in military schools. Our country is not without defenders.

In this lecture an attempt has been made to emphasize the fact that all military forces, whatever their nature, should be thoroughly trained before being called into *actual* service, and that the failure to observe this military truism during the century and a quarter of our national existence rendered the militia, upon which the country depended during that period, an inefficient and expensive force. An unformed policy, confounding military resources with military strength, and leading to imperfect and ill-digested legislation, is mainly responsible for this. But experience is the great teacher, and to day our people seem to realize that the military profession is indeed a profession, and that soldiers cannot spring into existence panoplied for war as did Athena from the brain of Jupiter.

From untrained militia the States have gradually evolved trained forces which they called the National Guard. But they were not in reality national forces, though they might be called into the service of the Union as militia. There was no uniformity, little cohesion, and a lack of system, with the consequent inability to effectually coöperate with the regular army, which should form the nucleus of all. Then comes the new militia act, the Dick bill, and the National Guard of the States becomes the National Guard of the nation. Our military policy takes form, a system is

evolved harmonizing discordant elements and enabling all to work for one common end.

But the picture is not entirely without shadows. The way has been blazed, but much work yet remains to be done. It will be observed that the provisions of the new militia act are operative mainly upon the States, and not upon the National Guard direct. Aside from requiring on the part of the States certain coöperative work as a condition precedent to their receiving allotments of money, the law is without sanction. Whether or not this is an element of weakness remains to be seen.

The duty of the States is plain. Their legislation concerning the National Guard should be along the lines laid down by the Federal law. Otherwise confusion and lack of harmony must follow. For the National Guard only such men should be enlisted as would probably pass the mustering officer when they are called into the Federal service. So also the State codes of discipline, their military law, should, so far as possible, be assimilated to that governing the regular forces. The reason for this is obvious. Simplicity begets efficiency, the real test, the watchword of the army.

Officers detailed to inspect or on duty with the National Guard, or with any troops, should hew close to the line regardless of criticism. The military profession is not a pastime, and praise should be bestowed only when honestly earned.

A word more to my brothers in arms of the National Guard and I am done. Laws and regulations can call armies into existence, but cannot alone mould them into shape. After all has been said and done, the real test of the efficiency of a military establishment is found in the ability, zeal and integrity of its officers. It is they who breathe into the legal organism the breath of life and make of it a living potentiality. The future of the National Guard is in the hands of its officers. They are the guardians of the trust, the nation the beneficiary, and the people are watching how the duty is performed.

TROOP "M" SIXTH CAVALRY IN THE CHINESE RELIEF EXPEDITION OF 1900.

BY CAPTAIN DE R. C. CABELL, FIRST U. S. CAVALRY.

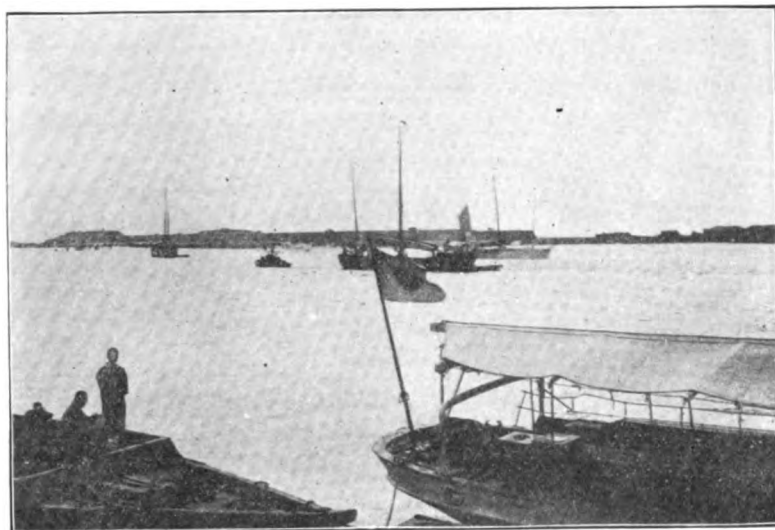
THE First and Third Squadrons of the Sixth United States Cavalry were assembled at San Francisco the latter part of June, 1900, with orders to sail on the *Grant* July 1st to Nagasaki, there to receive orders for the Philippines or for China. About 250 horses had been sent from Jefferson Barracks to Vancouver to go on a horse boat from there; the remaining horses left San Francisco July 1st on two horse boats.

There was considerable hurry and some confusion in loading the property, as it was desired to send the regiment forward as early as possible. Twenty-five sets of the horse equipments of my troop had gone with that number of men to Vancouver with the horses of my troop and were to go on the horse boat from there. When the order was received to place the remainder of my horse equipments on one of the horse boats sailing from San Francisco with the horses of other troops, I endeavored to get it changed, and tried to show that if we went to China and there was need of getting quickly into shape for work, it would be easier and quicker to get the men, horses and equipments from two boats than from three. For some reason this change was not allowed, and I sailed with my horses on one boat with part of the horse equipments, the rest of the equipments on another, and seventy-five of my men on a third.

The *Grant* arrived off Taku the morning of July 30th. None of the horse boats had arrived and none came until August 2d or 3d. Seven troops of the regiment went ashore August 1st. My troop was left aboard the *Grant* with orders

to remain there till I had succeeded in landing all the property of the regiment and then to promptly join the regiment at Tien-Tsin.

As we lay out ten miles or more from shore, and boats could cross the bar only at high tide, thus making but one round trip a day, and above all, as lighters were *very* few and far between, this was a job that appeared well nigh endless.



WHERE SIXTH CAVALRY LANDED—TAKU.

The next five days were unhappy ones, filled with efforts to beg or borrow lighters, distracting rumors from Tien-Tsin, (thirty miles inland) that the Relief Expedition was expected to start daily from there, and finally that it had actually started, and that we of "M" Troop were hopelessly out of it. Then we heard that the Sixth had been left at Tien-Tsin to await its horses and equipments.

The 3d of August passed with no more lighters, probably for several days, and a large part of the property still on the *Grant*. That night, through the courtesy of Captain Byron, the quartermaster on shore, I was promised the use for one trip of a small steamer engaged by him and expected next morning from Hong Kong, provided I caught the steamer

before he did. So, early in the morning I took the steam launch and cruised among the sixty or more war ships and transports looking for my steamer. Fortunately I got it first, took it to the *Grant* and began its loading. The last of the three horse boats had gotten in the night before. I went to the one carrying my saddles, etc., and fortunately found most of them stored on deck. I took them in a row boat to the *Grant*.

We reached Tongku with the last of the regiment's property, my troop and part of the equipments at 11 o'clock P. M. August 4th. Next morning we boarded some flat cars on the small railroad managed by the Russians and reached Tien-Tsin at 11 A. M., having met on the road a telegram from the Colonel ordering me to remain at Tongku till all the horses of the regiment had landed. As the trains in passing did not stop long enough to change cars I had to go on to Tien-Tsin.

Leaving my troop at the station I walked two miles out to camp and reported the facts.

I was told to remain and unload a number of cars containing heavy boxes of artillery ammunition. Seeing this could not be done that day with my men I sent out and rounded up one hundred coolies, who were glad to work for food, though they had to be guarded to prevent the troops of other nations seizing them. With their help the cars were unloaded by dark. When I was at the camp at noon I had asked for transportation to take my troop baggage to the camp, and was told that all available transportation but one wagon had gone with the Relief Expedition which had left the day before. However, I took out a load on the coolies. Next morning all my coolies, whom I had been ordered to turn over to the quartermaster, had escaped. Getting permission to go down to the station to see what I could do towards getting the rest of my baggage out, I sent out and secured the service of one hundred and fifty more coolies, and started them on regular trips to camp with my lighter baggage. In the meantime, by arrangement with Captain Byron, my troop set up eight wagons which had been shipped "knocked down," he allowing us to use them for one trip in

return for this work. By these means I succeeded in getting all my horse equipments and all of my light baggage which had arrived, out to camp.

The baggage of the other troops was at the depot at Tien-Tsin and Tongku. I now needed only my horses to have one troop of cavalry ready for business, and they began to come in on the 6th by rail from Tongku. At 6 P. M. on the 7th I reported to Colonel Wint that I had sixty-five men mounted and equipped for the field. He asked me how many horse equipments there were in the other seven troops, and on investigation I found sixteen sets. Colonel Wint then told me to take all of my troop that was ready, and the sixteen men to whom these equipments belonged and start next morning to join the Relief Expedition.

This expedition had left Tien-Tsin August 4th, and fought the battle of Piet-Sang, ten miles from Tien-Tsin, early on the 5th, and the next day fought the battle of Yang-tsun, twenty miles from Tien Tsin. In this battle the Americans had borne the brunt of the fighting and had lost some eighty men, killed and wounded, and had driven the Chinese headlong from the field in the direction of Peking. The Relief Expedition driving the Chinese towards Peking consisted of about 10,000 Japanese, 3,000 Russians, 2,500 Americans and 2,000 British. The Japanese had some field artillery and a little cavalry. The only other cavalry with this expedition was a squadron of Bengal Lancers with the British.

After the battle of Yang-tsun the Chinese retreated rapidly and were pursued by the allied army on the road along the Pei-ho River.

The Japanese, having so much the larger army, were given the post of honor at the front, followed by the Russians, Americans and British on the same road.

On the morning of August 8th the troop left Tien-Tsin in high spirits at the prospect of joining the army at the front. They had worked hard and faithfully for a week to get ready for this start, and were happy that their labors had been rewarded by this opportunity, so they left Tien-Tsin whistling, singing and laughing. This joyful frame of mind

of the Chinese army on the battlefield of Piet-sang, where the Chinese soldiers had blunted carcasses of Chinese soldiers lying along the road, caused a sudden silence. There was no more whistling or singing.

At Piet-sang we found a company of Chinese soldiers, a lieutenant Coleman and a detachment of Chinese soldiers on the bridge of boats across the river. We went further to the battlefield of Piet-sang and camped for the night.

At Piet-sang the roads cut up and broken by the Chinese troops and trains, and the Chinese soldiers were just twenty-four hours' march, and very leg weary, made the

discussion at Tien-Tsin as to whether we should get forage on the way to Piet-sang. I had seven pack mules and eight men. I had loaded the pack mules with supplies. Besides this, Colonel Wint had ordered me to go as far as my first camp. Our apprehensions were not unfounded, as we proceeded, we found a great number of mules on each side of the road, and a great growth of Indian corn and other crops. It is true the corn was still not ripe, but it was the best forage for horses.

On the great plain were scattered at intervals of three miles small villages, and in some of them were Indian corn. It was not always possible to get forage, because the Chinese army had doubtless destroyed it, and the allies had used all of the forage they could lay hands on.

My detachment was divided into four well organized squads, and to prevent confusion and to give every man a share of the work, I had arranged the duties of each squad so that on arriving at camp each squad knew what it had to do, and it was not necessary to stop at



GENERAL CHAFFER AND STAFF.

any time and make details. For instance, on arriving at camp the leading squad, which had been the advance guard, at once posted themselves as outposts and proceeded to locate the water and wood. This squad formed the camp guard that night. The second squad, after putting their horses on the line, went out and got the forage; the third squad got the wood and the fourth squad the water. If it happened the forage was very scarce or hard to get, all the other men of the troop assisted in bringing it in, for I had made it a rule that no man should eat his supper or breakfast until his horse had been fed with the best obtainable forage, and I saw personally that this rule was enforced all the time. The result of this distribution of duties was that we got into camp quickly and with the least fatigue to men and horses.

Neither men nor horses rested much the first night. It was hot and the mosquitoes were in clouds. I saw some men sleeping with their saddle blankets wrapped around their heads.

Next morning we crossed the Pei-ho again on a bridge of boats, and at noon overtook the pack train of the British contingent.

This train consisted of a large number of small mules. The drivers and packers were East Indians and seemed to manage their mules well. On looking at their pack saddles and carts it struck me that there was too much iron about them, making them unnecessarily heavy and very noisy. The pack mules were driven along the road in strings of threes, the lead mule being led and the second and third hitched to the saddle of the mule in front of it. I saw no runaways, no straggling, and there was always a man right on hand to adjust the pack if one slipped.

The carts also seemed to be efficient transportation, except that they were too heavy, and therefore the mules attached to them could not pull much besides the cart.

The idea of having carts instead of heavy wagons like ours struck me as a good one, for if one cart became disabled it was so much easier to pull it out of the column, unload it, fix it up, and reload it than it is with one of our big wagons. The pack mules seemed too small to be very serviceable.

Late this afternoon we also passed a portion of the Japanese transportation. This consisted of a long train of light two-wheeled carts, drawn by one pony in shafts; sometimes a second pony was hitched by ropes in front. Each cart had a driver, and was piled high with baggage, rations, etc., done up in small, neat, compact bundles.

Occasionally I would see one of these carts turn out of the road to repack or to adjust the harness, or something of



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Occasionally I would pass stragglers of the various armies. An American seldom had anything but his canteen, sometimes his gun, but a Japanese soldier who fell out was invariably seen with all of his arms and equipments, and when he rejoined his company he must have taken his whole equipment.

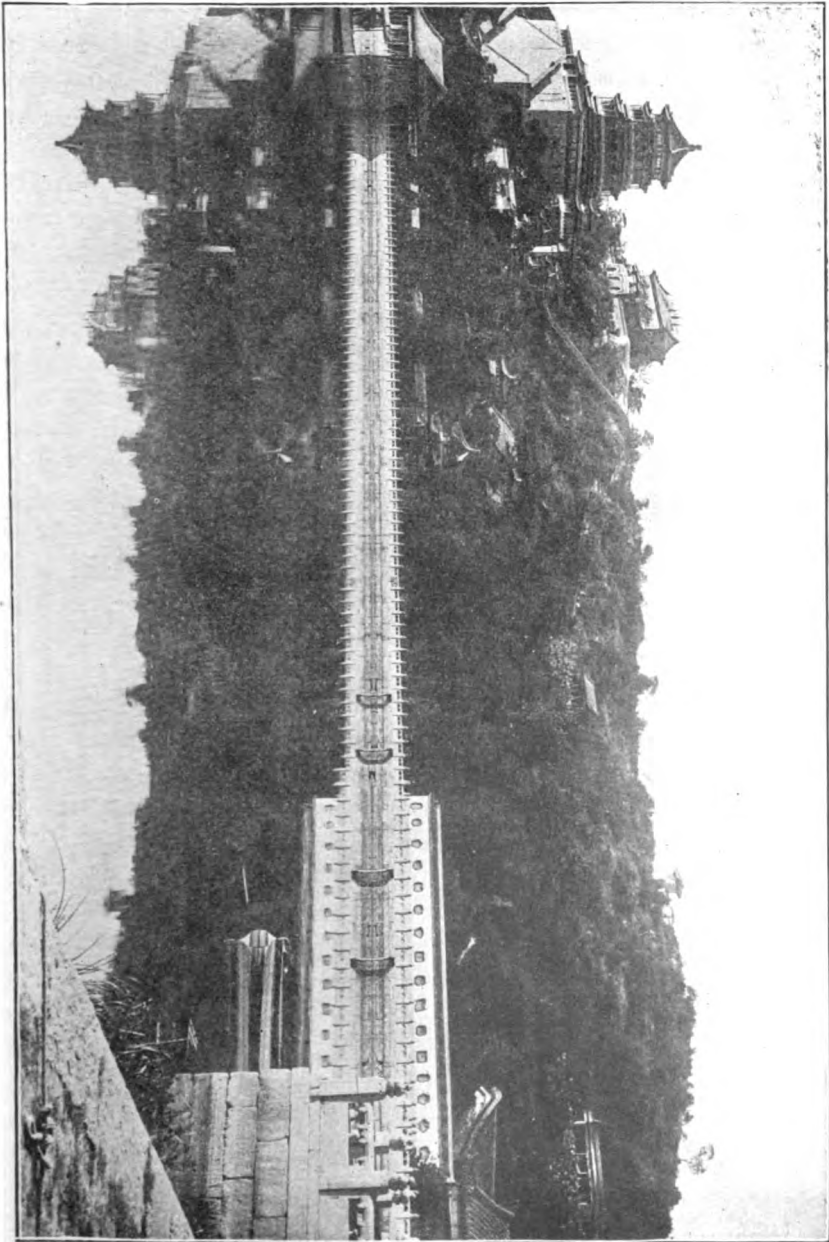
We saw for the first time how a camel might be used to lighten the hardships of such a march. Where the road passed up a hill in a narrow cut we came upon a camel, led by an Indian sikh, and loaded with two or three hundred canteens of water, which covered his back and sides like clusters of grapes.

At sunset that day I reported to General Chaffee at Peh-moon, near Ho-Si-Wu, just half way from Tien-Tsin to Peking. He had with him the Ninth Infantry, two battalions of the Fourteenth Infantry, Reilly's battery field artillery, two battalions of marines, and a detachment of the Signal Corps.

The American transportation consisted of fourteen four-mule wagons, fifty pack mules, and another pack train of fifty mules loaded with ammunition. One pack train did not join General Chaffee until two or three days later. We were told that the Japanese army were ahead of us, keeping in touch with the Chinese. They were followed by the Russians, and we were to follow them.

August 9th, for ten miles we marched along in rear of the Russians and I got my first sight of these soldiers on the march. They were heavy, stolid looking men, who straggled little and seemed to stand the heat well. The company just in front of me had a large kettle mounted on two wheels and drawn by two small horses. They managed to keep a fire under this kettle and so boiled water all day while marching on. I filled my canteen once or twice from this kettle and found the water good. It is true it was hot water when I first got it, but it was soon as cool as the water in the other canteens exposed to the sun. I was told that this kettle with hot water in it was, on its arrival in camp, used to make the soup which constituted the main part of these soldiers' supper. It would seem a most excellent thing for us to get one of these kettles and see what Yankee ingenuity could do to improve it and then give one of them to every one of our companies.

The Russians wore a white cotton uniform and a white cotton cap. The first day I saw them they struck me as being the dirtiest looking soldiers I had ever seen, and they



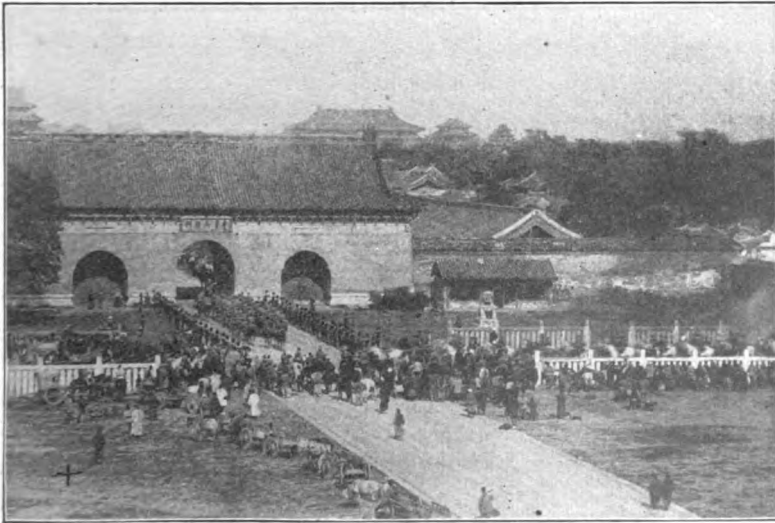
SUMMER PALACE.

continued to look dirty until one day when they stopped a few hours near water. Next day these men turned out in immaculate looking white; that is, they were made to wash their clothes whenever they had an opportunity, and I never saw them in anything like a permanent camp but what they had exceedingly clean looking uniforms.

About 5 o'clock of the afternoon of this day we made camp in a village several miles off the main road, after marching sixteen miles. The main road here made a big bend and we cut across a chord of the arc. The wagon train did not get into camp that evening. At 10 o'clock I was directed to send a squad back a few miles to locate it. This squad reported back at 12 not having seen the wagon train. I was then directed to take the rest of my troop and go back to our camp of the night before to look for it. When we reached the place, about six miles back where we turned off the main road, I carefully examined the road for marks of the passage of our wagon train, but there had been so much travel over this road that there was absolutely no sign of its having passed, nor could I hear anything of it from any of the numerous stragglers whom I saw along the road. I therefore continued on back to Peh-moon, where I got breakfast, but saw nothing of the wagon train except the tracks where it had turned into the main road.

When I left Tien-Tsin I had been unable to obtain any map of the country between Tien-Tsin and Peking. I had been given permission to copy a map of this road. This copy was made by Lieutenant Guiney of my troop, with a lead pencil in a very short time at night by the light of one flickering candle. The map was poor, indistinct and inaccurate in the first place, so he copied only enough of it for us to reach General Chaffee by its aid. We had no other map, and so the country ahead of us was absolutely unknown to me. Seeing and hearing nothing of the wagon train at Peh-moon, I started back to the front again, searching the roads on each side for evidence of the train leaving the main road. There were many roads which led off the main road, each of them so much traveled and cut up that it was impossible at times to tell which was the main road. I traveled

along until about sundown without having come upon any sign of the wagon train. I had overtaken parties of Japanese soldiers, and for this reason thought I must be near the front, and therefore concluded, as I had no rations, to go back to our camp of the night before. I reached it in eight miles, as we traveled in the dark through corn fields and villages where there were no roads, being guided only by a small



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compass in a wrist watch, and what I kept in my head of the different distances I had marched that day. We camped this night without rations or shelter, and in some rain. Next day I overtook the army at Tung chow, sixteen miles from Peking. We had been in the saddle almost continuously thirty-six hours.

From Tung-chow to Peking there extends a large canal running due west and in almost a straight line. There are four roads running parallel to this canal, each leading into a gate in the wall of the city of Peking. These roads are about a mile apart, two on each side of the canal. It had been decided that from Tung-chow to Peking the four armies

should march abreast, one on each of these four roads. The Japanese were on the right, then the Russians, Americans and British. The country was still perfectly flat and covered with a dense growth of high corn. Numerous crossroads intersected the road that we traveled. To keep up the normal formation of an advance guard in this country and explore it thoroughly and fast enough not to impede the march of the troops behind was not possible, because the horses traveling through the high thick corn and forcing their way through it where there were no roads, soon became exhausted; therefore I improvised a formation for my advance guard which I had never seen used before. Lieutenant Guiney, with one squad of eighteen men, was sent forward as an advance party. Of these men he kept a small detachment in the road and sent the others in twos, threes or fours, along the crossroads to the right and left, with orders after exploring the road for half a mile or so to return to the main road by the same route and to fall in in rear of the troop.

As soon as one squad began to be much depleted I sent another squad forward from the support at a trot to replace it. In this way every horse had an equal share of the fatigue of the march, and we made eleven miles to camp in about three hours and a half, having covered the country completely for half a mile or more on each side of the road and without seriously fatiguing any horse. We saw no Chinese troops, and only occasionally a few unarmed Chinese or men who had just thrown away their arms.

About 10 o'clock we reached a village about five miles from Peking. Shortly after we arrived at this place General Chaffee told me to take six men and go to the road a mile and a half to the left, upon which the British were advancing, connect with them, and then use the six men as an outpost. I went along through the high corn until I got near where I expected to find the road, when I could see trees which indicated a village. At the same time I heard a great chatter in Chinese, and dismounted with a sergeant to slip up on the place and see what was there. When I got within about a hundred yards of the village I saw about eight or ten Chinese soldiers who, on seeing me, set up a shout and ran back into the

village. I could see thirty or forty others hurrying from one side of the street to the other with their arms. I ran back to the horses and dismounted, and knowing that it was useless to longer try to conceal our movements, and yet not knowing just what was in the village, I determined to charge through it. This we did in column of files, firing with our pistols as we went. There were some two or three hundred Chinese soldiers in the village, but they were too frightened



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We were told that it had been agreed that the four armies were to lay over on this line the next day, August 14th, so as to bring up everything from the rear and get in readiness for the attack on Peking, for it was expected there would be a hard struggle.

At 5:30 o'clock on the 14th I was ordered to take my troop and make a reconnaissance toward Peking, going until I met with some resistance or until I reached the wall, and then to return to camp. I expected to be back by 8 o'clock. After going about three miles the advance guard reported to me

continued until we neared the battlefield of Piet-sang, where the sight and smell of numerous bloated carcasses of Chinese and horses scattered along the road, caused a sudden silence to fall on the troop, and there was no more whistling or singing that day.

After nooning at Piet-sang, where we found a company of the Ninth Infantry under Lieutenant Coleman and a detachment of Japanese left to guard the bridge of boats across the Pei-ho, we went on ten miles further to the battlefield of Yang-tsun, where we camped for the night.

The weather was extremely hot, the roads cut up and dusty from the passage of so many troops and trains, and this, added to the fact that my horses were just twenty four hours off the transport and were very leg weary, made the march a hard one.

There had been considerable discussion at Tien-Tsin as to whether it would be possible to get forage on the way to Peking, and although I had been given but seven pack mules to carry the rations of my seventy-eight men, I had loaded one of these mules with grain. Besides this, Colonel Wint had sent a spring wagon with me to go as far as my first camp with one day's grain, and then return. Our apprehensions were greatly relieved when we found, as we proceeded, that the country was flat and level for miles on each side of the Pei-ho, and was practically nothing but one immense corn field, covered with the finest growth of Indian corn and kow-ling I have ever seen. It is true the corn was still not ripe and therefore not the best forage for horses.

In all directions over this great plain were scattered at intervals of two or three miles small villages, and in some of these we found dried corn. It was not always possible to get this dried corn, because the Chinese army had doubtless destroyed all it could, and the allies had used all of the rest that they could lay hands on.

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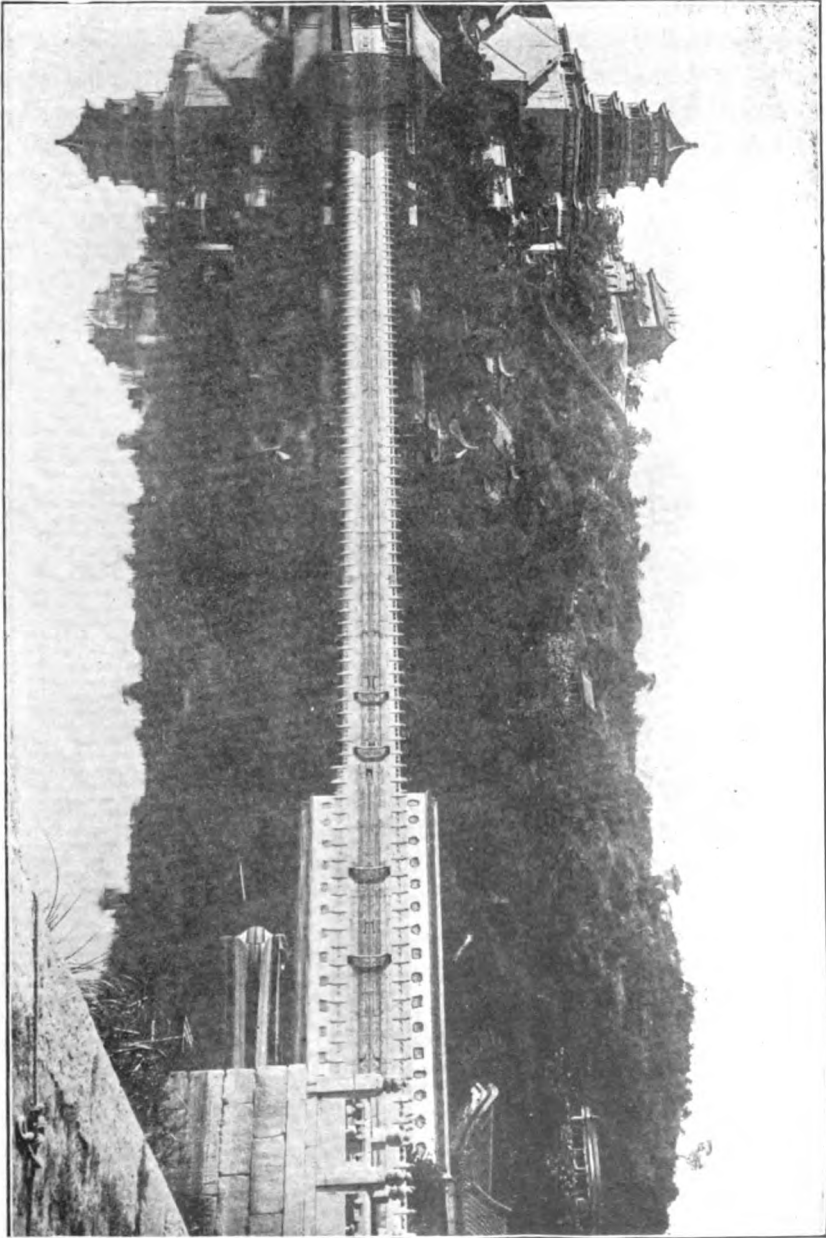
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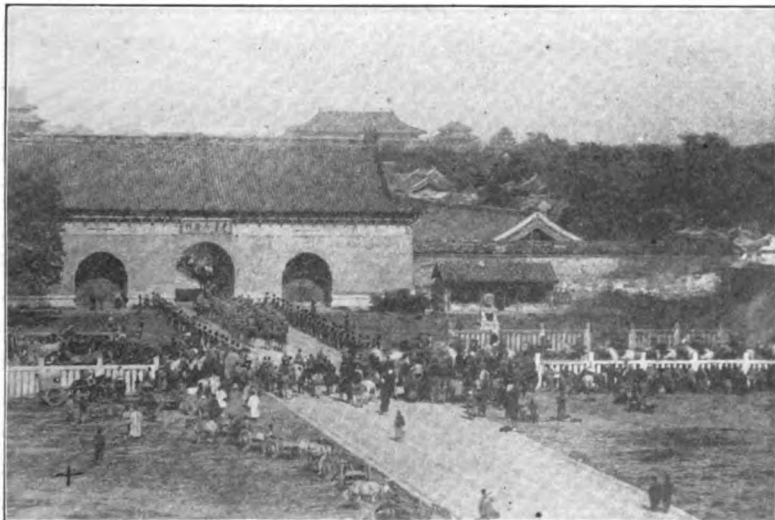
SUMMER PALACE.

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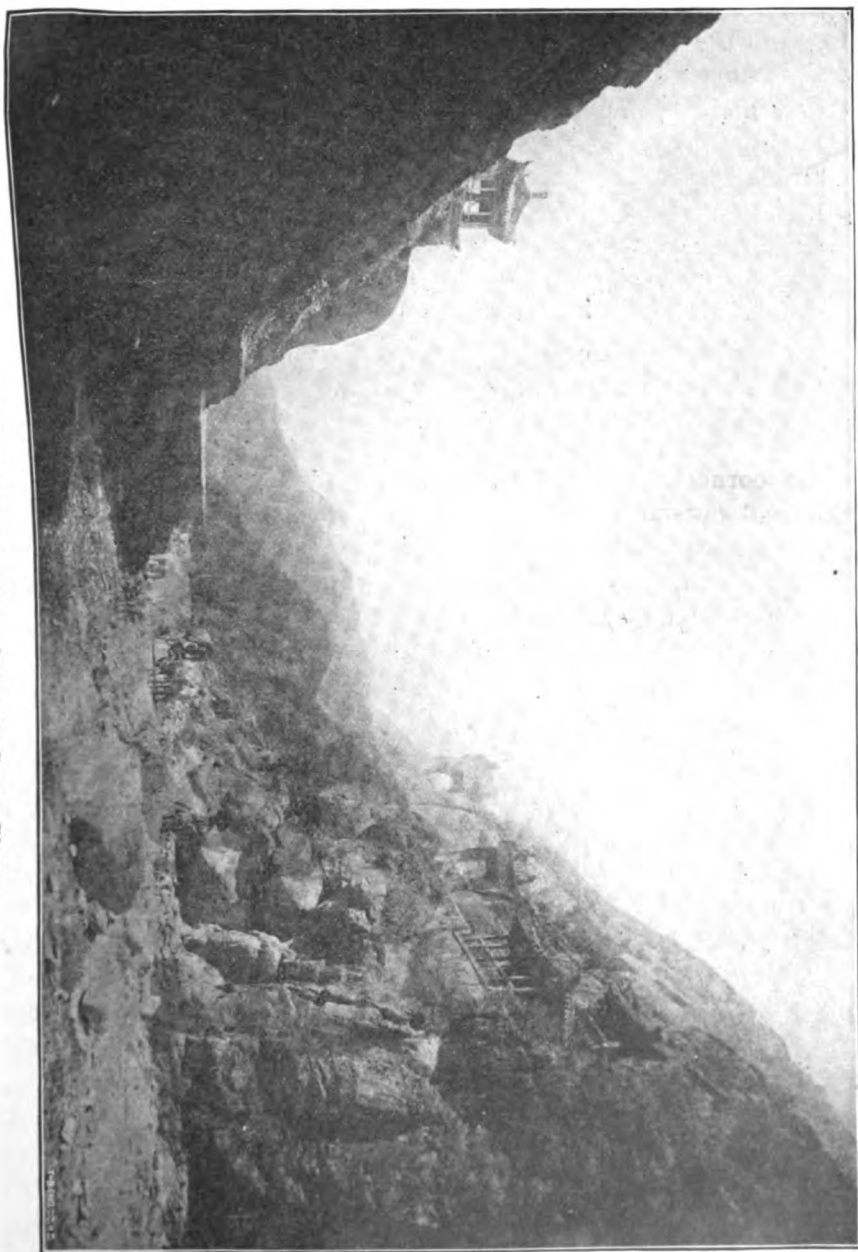
that they had just seen a British lieutenant, who stated that he and his forty men had just been driven back. I sent word to him to turn back and that we would see what was in front of us. I do not think this message reached him. Soon after this, we were fired on from the left front and our advance party driven in.

The firing was in volleys and from apparently several hundred men. I dismounted the troop, put the horses under shelter, and took up a position which was sheltered from the left front, and returned the fire, sending a mounted squad under Lieutenant Guiney to make a short reconnaissance and with orders to retreat around my flank if he found any considerable body. He developed a party of infantry and some mounted men and then joined me. After some twenty or thirty minutes of this firing we got several volleys on the right rear, and I mounted and withdrew about five hundred yards to where I had seen a strong compound, and I sent word back to General Chaffee that I had been attacked and would stay where I was.

A civilian interpreter had accompanied me that morning, and as soon as the firing began he fled back to camp and reported that my troop was surrounded by Chinese infantry and cavalry, and was being cut to pieces, whereupon General Chaffee had promptly come forward with his force. When he reached my position and saw the wall of Peking he formed his line and advanced on it, and in a short time a company of the Fourteenth Infantry had scaled the wall.

During this attack on the wall my troop was covering the left and front, and was for some half an hour or more engaged in the clearing of a gate by dismounted carbine fire. At 11 o'clock the night before we had heard a heavy cannonading, which continued all night, and thought it must be the Chinese attacking the legations, but when the Americans reached the wall they found that most of this firing had been by the Russians and Japanese, who had advanced the night before and attacked the wall. It was said that the Russians had in fact succeeded in taking the gate and gotten in the city, where they were ambushed by the Chinese and driven out with a loss of a hundred men.

TAU-SING CHIO—ON ROAD PERIN TO GREAT WALL.



It was this same gate that was taken by the Americans about 11 o'clock the morning of the 14th, just after they had scaled the wall.

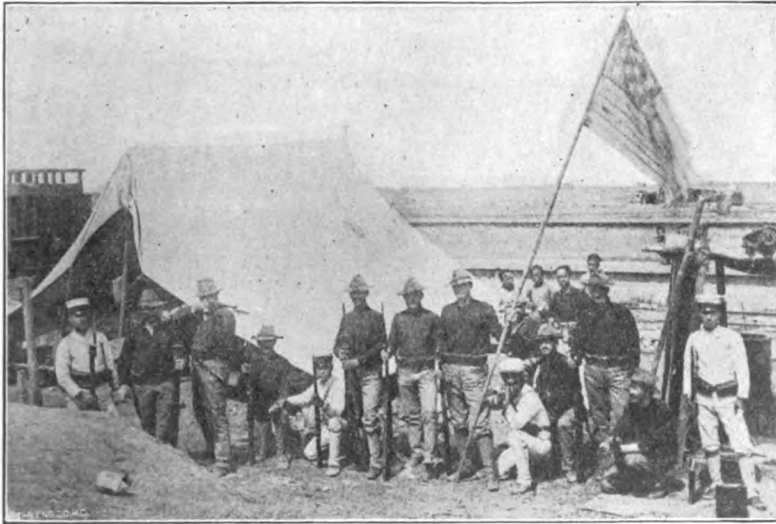
Though the Americans were the first in the city by several hours, they were not the first to reach the legations, having no guide who knew the streets. The British who entered by the gate which my troop had cleared of Chinese, marched straight to the wall of the Tartar City near the legations, and going under this wall by the water gate, entered the legations without a fight, the Americans being a short time behind them.

About 1 o'clock I left my troop dismounted under the wall at the corner where it had been scaled, and walked along the wall outside for about 200 yards, when I came to the Tung-pien gate. This gate and the narrow street leading from it into the city were jammed with three or four hundred Russian infantry. There seemed to be some dispute or misunderstanding between them and the Americans as to which were entitled to possession of the street. The Russians were not firing nor making any other use of the street but were just standing in it. They were very ugly as I passed through them.

A hundred yards or so from the gate I saw General Chaffee's staff and two guns of Reilly's battery. The latter were in position on an open stone bridge, firing at an immense tower on the wall of the Tartar City, at a distance of one hundred yards. This tower was filled with Chinese riflemen, but the men at the guns did not seem to mind the bullets that were flying around them, and continued pegging away at the tower.

When I went back through the Russians at the gate they were still ugly, and were venting their spleen by the pleasant pastime of murdering women and children. I saw a Russian soldier pick a woman up by the waist, turn her feet up and mash her head against the pavement, and another take a small child by the ankle, swing him around his head and dash his brains out the same way. Whether there were officers with these troops I do not know, but it is presumed there were.

That night we camped between the moat and the wall of the Tartar City. It rained, and we had no covering or bedding. Lieutenant Guiney and I stuck our sabers in the ground and rested one end of the guidon staff on these sabers, the other end on the ground, and stretched a piece of matting which we found across this, and so got some protection from the rain.



JAPANESE AND AMERICANS AT TAKU.

Next morning at 7 o'clock my troop followed the artillery through the Chien-men gate of the Tartar City, into a flag-paved court, just inside this gate. I went up on the gate, which was about fifty feet high. There were four guns of Reilly's battery up there. Two of them pointed toward the palace and were not firing, and two of them pointed west along the wall of the Tartar City, firing at the gate on this wall a mile off. They were doing fine practice, hitting the gate at nearly every shot. About this time a heavy firing of small arms was opened on the gate from one of the gates of the palace, about seven hundred yards to the north of us. We could see the Chinese, who were using all kinds of small arms, smokeless and black powder, Mausers, Remingtons,

jingals, bows and arrows, and as Major Quinton expressed it, every weapon known to modern and ancient warfare.

General Chaffee stood looking coolly at this sight for a few minutes, and soon opened on the enemy a heavy fire from infantry and marines posted on the Chien-men gate and wall on each side of us, and a wall in front of it, while part of the Fourteenth Infantry advanced on the gate, which was soon taken. I rejoined my troop in the court below, and we sat there holding our horses and talking to some companies of the Ninth Infantry, which at this time were also in reserve. This sounded more like a battle than any I had seen. The four guns of Reilly's battery were firing just over our heads, as were some five or six hundred infantry and marines. The wall just in front of me was filled with infantry firing, and a touch of reality was given by the sound of a few Chinese shots that were striking the stones of the court. Lieutenant Corcoran, Sixth Cavalry, in command of a Gatling gun detachment, brought his gun up at a trot through the gate where one of his men was killed, and opened fire on the Chinese. He was vigorously cheered by our waiting troops, to whom the sound of his firing was a welcome one.

The fight was over by 2 o'clock, when the Americans had taken the four gates in succession and had driven the Chinese off the gate over the door of the palace.

It was said the fighting was stopped at this time by the Allies, who were unwilling for the Americans to occupy the palace, and they insisted on the Americans withdrawing from the Imperial City, which was done at 5 o'clock, and we camped this night in the same place we camped the night before. The assaulting columns had captured a large quantity of flags, which were sent back to me to keep, so that when my troop marched out of the Imperial City it looked like a troop of lancers, each man carrying a Chinese flag. These two days' fighting, resulting as they did in the relief of the legations and the capture of the palace and the whole city of Peking, virtually ended the campaign, though there were a few minor affairs later at other places.

The next day the French troops relieved the Pei-tang Catholic Cathedral in the Imperial City, which had been held

for two months by fifty French and Italian marines under the leadership of Bishop Favier. This cathedral was so large a compound that it would have required several hundred men to have properly defended it against a courageous foe, yet these fifty marines had held it against the daily attacks of thousands of Boxers and Imperial troops, who had never once effected an entrance, though they had exploded



MEETING OF THE POWERS' REPRESENTATIVES.

seven large mines under different parts of the enclosure and had killed or wounded between thirty and forty of these defenders.

If the holding of the legations by seven hundred soldiers was a great thing, the holding of this place by fifty men when it was in the heart of the Imperial City and subject to assaults from all sides, is almost unparalleled in history.

THE JAPANESE SOLDIERS.

Of the sixteen thousand troops composing the Relief Expedition, the Japanese had between eight and ten thousand. It was said that these were the picked troops of Japan, and

that they had been told that any man who misbehaved before the nations would not be allowed to return to Japan. They were, therefore, the very best that Japan could do, and there were no better. They were brave, active, hardy and uncomplaining soldiers. No risk, nor even the certainty of death kept them from doing their duty. It was said that, on the night of July 13th, when the attack on Tien-Tsin had failed and it became necessary to blow up a gate of the walled city or abandon the attack, early next morning twenty Japanese soldiers volunteered to blow up the gate, though this had to be done in the actual presence of hundreds of Chinese immediately over them on the wall, and they must have known that few or none of them would return alive from the attempt, and yet they successfully blew up the gate, and nineteen of the twenty were killed or wounded. Again at Peking a similar attempt was made to blow up a gate. After the fuse was lighted the Chinese opened a small postern gate and sallied out and put the fuse out.

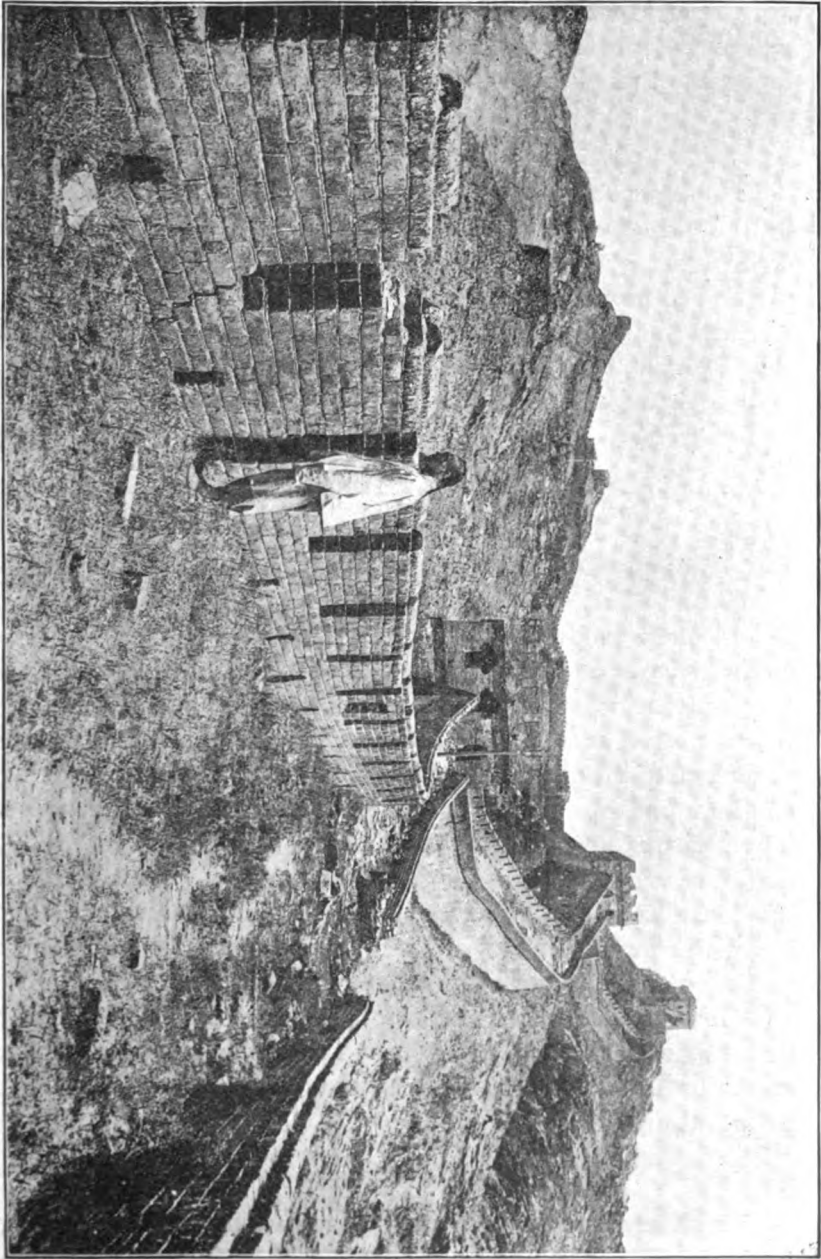
The Japanese seeing this, returned, relit the fuse and stayed right there until it exploded, some being blown up with it.

One great advantage these people had as soldiers over our men was, that they could live on so little and so simple fare that the commissary trains were very small. Whether they would make as successful soldiers against a braver enemy remains to be seen, but there was nothing that I saw that would lead me to doubt it.

THE RUSSIANS.

The difference between the Russian officers and soldiers that I saw, was more marked than that between the officers and soldiers of any other nation. Many of the officers seemed educated, polished gentlemen, and were doubtless accomplished soldiers.

The men, on the other hand, while strong, hardy and possessed of plenty of brutal courage, were, nevertheless, stupid, dirty and brutal looking. The impression we got of the Russians as a whole, was that if they were holding a



GREAT WALL.

position and under control of their officers, they would probably stay there as long as a man was left, but in an attack when the individual qualities of the men would be called into play, that they would show up poorly.

THE FRENCH.

The French had no troops with the Relief Expedition until Peking was reached, and they took no part in the two days' fighting, except a squad of twenty men who were with me on the morning of the 14th.

This squad was well handled and did good work. Later the French had some thirty thousand troops in China, among them some Chasseurs d' Afrique, who were fine looking soldiers.

THE BRITISH.

The British troops were composed of various tribes of East Indians and some English artillery. During the advance I saw little of them except of some native Indian lancers. These men made most excellent scouts. They went in small patrols of four or five well to the front, covering a large extent of country. It was said that each mounted man had a native servant to take care of his horse and equipments, and there was no cleaner looking, neater appearing soldiers on the march or on parade than these lancers. Their horse equipments were always in perfect condition, and I never saw better groomed horses. The latter were half Arabian and neat, clean limbed, small animals that stood the march very well, but they had many sore backs and did not carry near the weight that our horses did.

The English officers and soldiers fraternized with our officers and soldiers, and it was a common remark that we, meaning the American and British, were the only decent people there.

THE GERMANS.

The German soldiers did not arrive until after Peking was taken, so they had no part in the fighting. The Chancellor of their legation had been killed at the beginning of

the uprising, and they seemed to feel that they ought to do something, so they sent out numerous expeditions into the country and there were frequent rumors of battles in the country around Peking long after everybody else had gone into winter quarters.

The German soldier makes a magnificent appearance on parade, but he seemed entirely unsuited to a campaign in a hot country, and where he had long distances to march; nor did he seem to know how to care for himself well in the field, for it is said that there were more sick Germans in China than of all the other nations together.

THE AMERICANS.

We all know what our soldiers are, so it is useless to remark upon them. They were the same independent, careless, slouchy, but brave and intelligent men that we have in our army to-day.

The slouchy appearance of the American soldiers in Peking, as compared with the foreigner, was caused by the fact that the Americans in permanent camp were required to wear good, clean looking uniforms all the time as long as they had them. They had but two or three suits of blue, and in the dust of Peking these all became dirty, and there was no way of cleaning them.

The soldiers of the other nations took off their best clothes as soon as they returned from a parade or ceremony, and went around camp in their oldest clothes, so whenever they were turned out for a ceremony they excelled our men noticeably in the neatness and cleanliness of their dress.

THE METHOD BEST SUITED IN THE UNITED STATES ARMY FOR IMPARTING PRACTICAL INSTRUCTION IN "SECURITY AND INFORMATION" TO THE NONCOMMISSIONED OFFICERS OF A TROOP OF CAVALRY, INCLUDING A SCHEME FOR PROGRESSIVE EXERCISES IN THAT SUBJECT.*

BY FIRST LIEUTENANT MALIN CRAIG, FIFTH CAVALRY.

WE are taught that "cavalry is the arm par excellence for patrolling," and it is apparent that the security and information of any body of troops, will depend more upon the efficiency of its patrols than upon all the other means of gaining information combined.

Let us, therefore, dwell at considerable length on patrols and upon the individual members of a patrol, inasmuch as the success of the patrol depends upon the scouts, and the success of the force sending out the patrol depends in turn upon the success of the patrol, and so on, up to the main force.

The members of a patrol are scouts, hence we will examine into the necessary qualifications of a scout in order that we may tell our men what is needed. Not every man has these qualifications, nor can every man acquire them.

A good scout should be naturally fearless and energetic, he should have good vision and hearing, and have plenty of audacity tempered with judgment. He should be a good horseman, full of resource and expedients. He should be ever prepared to rely upon himself alone, and should never

*Subject of thesis required at the General Service and Staff College, Department of Tactics, in connection with the course in Security and Information.—[EDITOR.]

allow himself to be captured as long as he and his horse are not disabled by wounds or by accident.

A scout may add to the above essentials, certain other qualifications which may be considered as accomplishments, (such as, for instance, being a good shot, or conversant with the language of the inhabitants of the theatre of operations, or a military topographer) and his value as a scout will be accordingly increased.

Some degree of familiarity with topography is almost a necessity for a patrol leader, since information supported by a map, a mere sketch even, is more reliable, and conveys a far more accurate idea than can be obtained from a man who relies upon his unaided memory.

It is certainly to be conceded that a man in his first enlistment is fully occupied in learning the routine duties of a soldier, and it is with men who have previously been thoroughly grounded in their drill, horsemanship, etc., that we should work to gain the success that is demanded.

We will suppose then that our noncommissioned officers are well grounded in the routine duties of a soldier; that they are well instructed in troop drill, equitation, guard duty and fire discipline. They will have had, also, some instruction in the estimating of distances, signaling, camping expedients, and perhaps a smattering of elementary veterinary science.

Our subject should be then divided into its technical headings, as understood by the recognized authorities on the subject, and progressive instruction given under these headings.

Among the technical headings under which authorities ordinarily consider military methods of gaining information and security for an army are: "Reconnaissance in Force," "Special Reconnaissance," and "Patrolling." We shall discuss the last named first on account of its very great importance.

In instructing our men, we should assemble the whole troop for an informal lecture. The means to be taken will arouse the interest of nearly all the men, and give an opportunity to make necessary preliminary explanations, and comprehensively illustrate them.

It seems that the average enlisted man can gain a more

complete understanding of oral explanations and instructions when his eye is afforded opportunity to assist his ear. Knowledge acquired through the combined senses of sight and hearing is much more thoroughly, clearly and easily impressed upon the memory than that which comes through the sense of hearing only. For these reasons illustration of instruction is exceedingly valuable, hence desirable.

This can be accomplished by the use of large diagrams, as is shown by the various plates in "Security and Information"—on a blackboard, or by the use of pegs stuck in the ground and marked "sentinel," "vedette," "picket," "support," "reserve," "patrol," "scout," etc. Another method, better than any other expedient for illustrating instructions in minor tactics, we will designate the "Terrain Table," which consists in taking an ordinary table (the larger the better), and nailing boards vertically around its edges to a suitable height. Then fill the enclosed space with sand to a convenient depth. If the sand is moistened, it may be so manipulated as to represent almost any kind of terrain. Natural features are easily improvised—woods by sprigs of evergreen or twigs, farm houses or villages by blocks, roads and streams by strings or pieces of small rope, soldiers in patrol, outpost, advance guard, or any desired formation, by matches or toothpicks.

Here then we have the terrain, and it is right here that the men can be taught the theory of minor tactics and their own positions under various conditions. The instructor can explain and illustrate as he proceeds. Every man should be taught to find the points of the compass, and each should know what is required of him under any and all circumstances.

When the men have gained a general idea of the subject, and have learned to think of the table with its improvised natural features as a miniature terrain, a noncommissioned officer should be called upon to conduct a patrol from a designated point to some position indicated by the instructor. The movement should be made as it would be under natural conditions, keeping out of sight of a supposed enemy in a particular direction or directions, at the same time examining

all places likely to afford concealment to the scouts of the enemy, ascending all heights near the route for the view that is afforded (at the same time keeping concealed as much as possible), and in general, carrying out all the principles laid down in "Security and Information" for the conduct of a patrol of the kind used.

Individual men may be required to proceed in the same way until they understand what is required regarding the method of procedure of scouts; they may be then excused, and particular attention paid to the noncommissioned officers, who in the natural order of things will be the patrol leaders.

It will soon be found practicable to send out two, and later several patrols on the miniature terrain, sometimes with the same, sometimes with different objects in view. It will be apparent at once that the men are taking great interest in the work, and the noncommissioned officers in learning their own parts will unconsciously prepare themselves for the imparting of instruction to the other members of the troop. They will in addition gain familiarity with the particular duties of each man of a patrol, such as point, flanker, rear guard, etc.

The noncommissioned officers should be required to construct upon the terrain table models of well known ground, and later of territory recently scouted over, with a view to educating their memories and training their powers of observation in a way that will assist them later in the instruction in map making.

To this instruction should be added, without fail, exhaustive detailed practice in the writing of messages, and in the understanding of the essentials of military messages, viz: accuracy, legibility, and the separation of facts from surmises, etc. Also the method of recording the time, place of the sender, the address, signature, and methods of sending, all of which are so thoroughly explained in "Security and Information."

In connection with the formation to be taken by patrols, under various conditions of terrain, it may be well to state that the tendency at present is to use the skirmish formation, with flanks slightly refused, under nearly all conditions. By

means of this formation more front can be covered than in any other way, hence more opportunities are afforded for the gaining of information.

It will be a difficult matter to surround and cut off or to ambush a patrol in such formation, hence one or more men will always be able to get away in case of sudden attack. Thus all the requirements of a proper formation are maintained.

In a close country, it may be objected, this formation cannot be maintained. This is also true of the normal formation, and in such a case I would suggest the formation of a column or of columns of troopers, with a suitable distance between the men, the usual formation to be taken at the first opportunity (ploying and deploying where necessary).

If our men learn well, in theory as indicated, the duties they are to perform, and are then put through a course in the actual terrain, similar or better, identical with that which they have learned in theory, they will be far better equipped for their duties than the men who have had practical work only.

A scout may be a private soldier or he may be an officer, but regardless of his rank, the value of his work will depend on his natural ability, improved by training, study and practice. This is why I lay so much stress on the scout, and on the necessity for his being well trained, on the fact that it is on him that the success or failure of his patrol depends, and by regular gradations we find that the commander himself is dependent on the scout for information concerning the terrain, resources of the country, movements, strength and position of the enemy. The scout is, in general, the only man who can supply the above information in time of war and in the face of the enemy.

A special reconnaissance may be considered as a patrol, generally large, but at times small, and which has a particular object in view. Its commander will be, in general, an officer, and the success of the reconnaissance will depend upon the thoroughness of the instruction of the members in their duties as scouts. The importance of their duties cannot be too strongly impressed upon the individual scouts.

The line which marks the difference between a special reconnaissance and a reconnaissance in force is often a small one. The object in view is often the only difference. The troop should have practice in both kinds of reconnaissance, outlining an enemy where necessary.

In no kind of instruction does satisfactory success with the advanced portions more depend upon the thoroughness with which elementary principles have been taught than in field exercises. In such elementary instruction, therefore, too much care and study cannot be put upon efforts to impart to all a complete and intelligent grasp of the spirit of the principles involved. From the very nature of the work, few definite rules can be announced for its government. Success depends upon the prompt exercising of good judgment. This is why instruction should be directed toward creating an interest in the work, and producing an intelligent appreciation of its principles.

Noncommissioned officers and intelligent, selected privates (good horsemen, who habitually take good care of their mounts, preferred) should be carefully drilled and instructed in the duties of patrol leaders, scouts, etc. They should be required to study, and where practicable to recite prior to the practical instruction of the day, on the portions of the text which relate to the exercises of the day.

Some forms of compensation may well be given to men who show great interest and who do extra study, by according them whenever possible such privileges as naturally fall to patrol leaders and scouts, such as marching in pairs on the flanks, in the advance and in the rear of the column, whenever on the march. Strict maintenance of distance and position should not be exacted of them except during instruction.

A troop commander can make thoroughly efficient patrols of his men, certainly of a majority of them, by first giving them the illustrated theory as previously explained, then supplementing by practical work, as indicated hereafter in the progressive schedules.

As our drill regulations contemplate dismounted work by our men, the course of instruction should include some dis-

mounted work. The general conduct of mounted and dismounted patrols is to a great extent the same. Distances vary considerably, as do some of the means of examining houses, villages, enclosed places, marching on great roads, etc. At any rate, the men should be so trained as to be of value to the service in case of loss of horses, or as has been the case in our service lately, when cavalry regiments have been temporarily dismounted for service. The men should feel that dismounted they are the equal in every respect of infantrymen, being armed the same (with a revolver in addition) and mounted, considerably at an advantage, due to superior mobility.

Advance and rear guard duty should be first understood from the illustrated instruction, then by doing practically what has previously been explained and illustrated. The duties of constituent parts of the advance and rear guards can be readily taught, using the whole troop for the lines of observation and resistance, and indicating the reserves, and if necessary even the supports, by flags or other suitable mark.

The necessity for active, able scouts and patrols is especially apparent in the rear guard duty, where cavalymen are in demand on account of their ability to fight a delaying action, and then mount and get away in a manner that could not be successfully attempted by dismounted troops.

In the theoretical instruction in advance guard duty, given at the terrain table, the men can see how each patrol, flanker or point, guards the larger bodies which follow from surprise, and enables them to prepare for action.

In advance guard duty I would again advocate the skirmish formation in preference to the normal one. It preserves the integrity of the subdivisions under their own leaders; it covers more ground, therefore causes an enemy who would allow the advance party to get by and then deliver a few volleys into the flank of the support or reserve, or of even the main body, to keep at a greater distance than he otherwise would. In close country the skirmishers would close in and be in fully as effective a position as though they were in the normal formation. At any rate, the troop should

be well drilled in both formations. The training should cause each man to move to his position at command, almost automatically, yet all the while using his faculties for observing, and at the same time keeping himself concealed as much as is consistent with seeing all that can be seen.

Outpost duty in practice is but the expansion of what the men have learned from the instruction given at the table on the terrain of sand. They may consider the various bodies of the outpost as stationary patrols, with moving patrols here and there, to supplement with what information they may be able to obtain the security given to the main force by the stationary bodies.

The sentinels are merely performing guard duty under new conditions. They have more to remember in the way of special orders. Here the use and necessity for signals is taught and understood. The value of a good point of observation for the vedettes is pointed out—on high ground by day, below the sky line by night. All can be well illustrated by detailing patrols and scouts to represent an enemy; let them attempt to crawl up on the vedettes; let them run the gauntlet of a patrol or two. In short, let them compare their positions to those of a game stalker, always remembering that the game is stalking them at the same time, and that any carelessness on their part may cause the game to deliver a disabling blow from the limits of long rifle range.

I have merely touched upon the various headings, believing that the practical instruction will follow the illustrated. It seems to me that the method of the table and sand representing the terrain will give *more* than theoretical instruction, for it combines at least the elements of practice with the theory. The men *see* what they are to do before they do it, and they will involuntarily look upon their work in the field as they did at the table, only the table will be larger and they will be what was represented by the matches and toothpicks.

Before proceeding to the progressive scheme for instruction I wish to note that, where possible, it is advisable to give auxiliary instruction to selected men in topographical reconnaissance. The instruction should be given in detail,

practically conventional signs, map reading, map making, no matter how rough, road sketching, and most important, report writing.

After the men have practiced copying conventional signs and simple maps, they should be taken, dismounted, along a road for a mile or so, pacing and estimating distances, taking bearings with a compass, or estimating them, or both. After some proficiency is shown in the above, simple sketches may be made, showing courses of roads and streams, the men familiarizing themselves with the character of surrounding features which have military importance. Then other trips should be made over the same routes, the instructor pointing out such objects as should be described and explaining what features require mention, and giving reasons.

This instruction will teach the men to supplement their sketches with descriptive reports. The written reports should be carefully gone over by the instructor, omissions supplied, improvements suggested, and then the whole rewritten. As the men progress, exploring patrols may be sent out under them, a sketch and written report being required on return. The work should be checked and corrected.

A troop commander who is interested in his troop, can easily find time to get in the instruction above indicated, during the ordinary open season for the practical work, and during inclement weather for the theoretical. After the foregoing theoretical illustrated instruction, the troop is ready for the field work, in the sense that the men can work intelligently, having a good idea of what is wanted, and not being dependent upon hurried and often incomplete verbal instructions, given at the last moment just before they are to be put into execution. Where they are in doubt the non-commissioned officers will be capable of straightening them out. All will be eager to learn; their interest has already been aroused and is ready for the stimulation that properly conducted field exercises will bring. They will look upon their duty as a pleasant relaxation from the dull routine of drill.

The following schedule seems to more fully meet the requirements of our service and to be more thorough and prac-

tical than any other of which I know. It has been found successful in the few instances where tried. All depends upon the troop commander; if his interest is sincere that of his men will follow.

SCHEME FOR PROGRESSIVE INSTRUCTION IN MINOR TACTICS
(CAVALRY.)

PATROLLING.

Explanation:

Division of patrols:

- (a) Large.
 - (b) Strong.
- Strength of each.

Classification and purpose for which each is used:

- (a) Officers (small or strong).
- (b) Reconnoitering (small or strong).
- (c) Exploring (small or strong).
- (d) Harassing (small or strong, generally strong).
- (e) Expeditionary (small or strong, generally strong).
- (f) Visiting (small).
- (g) Flank (always strong).
- (h) Covering (always strong).
- (i) Connecting (always strong).
- (k) Pursuing (small or strong).

In the general formation of the patrol, note especially the composition of the point.

General conduct of patrol with reference to:

- (a) Moving to the front.
- (b) Moving to the rear.
- (c) Great roads, villages, inhabited places.
- (d) Halting.
- (e) Meeting a friendly patrol.
- (f) Civilians from direction of the enemy.
- (g) Questioning country people.
- (h) Civilians going towards the enemy.
- (i) Guides.
- (k) Concealment while reconnoitering.

Methods of reconnoitering :

- (a) Across roads.
- (b) Heights.
- (c) Defiles.
- (d) Bridges and fords.
- (e) Woods.
- (f) Inclosures (gardens, parks, cemeteries).
- (g) Houses.
- (h) Villages.
- (i) Cities and towns.
- (k) Enemy in position.
- (l) Enemy on the march.

Practice.

The troop should be divided into small reconnoitering patrols, and territory assigned to each. After giving special instructions to each leader, he should be directed to inspect his patrol, to designate a place of assembly, to give special cautions and to instruct the men in signals.

The patrol should be started out after questioning the leader and members to ascertain whether duties are thoroughly understood. Where possible, an officer should accompany each patrol, otherwise an especially well qualified noncommissioned officer, to make corrections of mistakes and to point out omissions. On completion of what orders require, the patrols should return to the starting point or post and report to the commander. It is assumed that all instruction will be consistent with the principles enunciated in the text for the conduct of cavalry patrols.

Repeat the foregoing instruction until it is thoroughly understood and comprehended. Too much care cannot be taken to see that the points, flankers and scouts do not go about in a purely mechanical manner, due to ignorance and lack of proper appreciation of the spirit and purpose of the duty.

Impress upon the men the fact that the typical formations given in the text are examples only, taken under normal conditions, and that they cannot govern *rigidly*; that all formations of patrols will necessarily vary, according to

their object, the nature of the ground, and the character and position of the enemy.

Teach the leaders that "the patrol must always be so formed as to facilitate the gaining of information, and to insure, if possible, the escape of at least one man in case the patrol should be cut off."

PATROLLING—*Continued.*

Explanation:

The commander explains:

Significance of signs:

- (a) Boats and bridges.
- (b) Flames and smoke of campfires.
- (c) Rumbling vehicles.
- (d) Neighing horses.
- (e) Braying mules.
- (f) Barking dogs.
- (g) Noises made by troops on the march and the distances heard.
- (h) Reflections of weapons.

Distances that different objects are visible.

Conditions tending to mislead judgment of distance.

Significance of:

- (a) Trails.
- (b) Abandoned camps and bivouacs.
- (c) Manner of inhabitants (hostile or friendly).

Reports:

- (a) When sent.
- (b) How sent.
- (c) Indispensable qualities.
- (d) Form.

Now divide the troop into expeditionary patrols (better small), and fully explain:

Proper procedure of patrol when its object is to:

- (a) Capture sentinels.
- (b) Capture patrols.
- (c) Capture prisoners generally.
- (d) Destroy roads, railroads or telegraphs.
- (e) Tap a telegraph line.

Considerations touching prisoners :

- (a) By whom questioned.
- (b) Best time for questioning.
- (c) Relative value of different grades.
- (d) Questioning enlisted men.

Practical.

The commander gives his instructions, the patrol leader then gives his, and makes his inspection of the men and horses. The patrols now start out, accompanied where practicable by an officer, in other cases by a well qualified non-commissioned officer, who points out to the leaders subjects for patrol reports, these to be written out in proper form (under supervision until proficiency is attained) and sent back by a member of the patrol.

In the absence of subjects, appropriate as far as regards sufficient number and variety, they should be assumed, and surrounding conditions should be suggested, to afford opportunity to instruct and test the knowledge of patrol leaders.

Reconnoitering patrols should now be detailed to operate against each other, using distinctive clothing to distinguish the members of the patrols at a distance. Care should be taken to prevent any actual combat. Signaling by firing should be done only when absolutely necessary, and other firing should be in some way limited, as for instance to the occasional exchange of shots by detached scouts.

Instructors are present with the patrols where possible, and an umpire should be present to comment on errors and failure to take advantage of opportunities to maneuver to advantage.

Expeditionary patrols should be operated against each other, and in all cases instructors and umpires should use every effort to have the operations conducted on tactical principles, with proper caution and restraint. Foolish and ridiculous sham fights with blank ammunition should be immediately stopped, and the exercises terminated for the time being, or else the patrols should be sent back to begin all over again.

ADVANCE GUARD DUTY.

Explanation :

The troop commander explains what would be the result of an attack upon troops marching in a body, and goes to the examination of the object of an advance guard.

Customary division of troops while marching :

- (a) Main body.
- (b) Advance guard.
- (c) Flanking guards.
- (d) Rear guard.

Duties of the advance guard.

Divisions of the advance guard :

- (a) Vanguard.
 - (a) Advance party.
 - (b) Support.
- (b) Reserve.

Disposition, movement and relative distances of constituent subdivisions of the advance guard.

Conditions influencing distance from the main body.

When the advance guard should be formed normally, and when it should be disposed as a skirmish line.

Use of signals and connecting sentinels.

Precautions against firing.

No complements rendered.

Practical.

After the above points have been well explained and are understood by the men, the troop is exercised in the various formations in the order in which they have been considered. Use roads which afford the greatest variety and number of opportunities for illustrating principles of advance guard duty. Where necessary, halts should be made for the purpose of corrections and explanations.

Noncommissioned officers should be given practice in commanding a vanguard.

ADVANCE GUARD DUTY—*Continued.*

Explanation :

The commander explains :

How the formation is modified by the terrain. This illustration should have especial reference to the duties of the flankers.

How a town is passed through—illustrate.

Conduct on encountering the enemy.

Practical.

The entire troop, properly divided, now forms and acts as advance guard to an assumed main body following in rear. (This latter may be represented by a man carrying a flag.)

To give opportunity for practice, a strong patrol, clothed in some distinctive uniform to personate the enemy, should be detailed to operate while slowly retiring in front of the advance. The patrol should not retire from successive positions, until forced to do so by superior forces or by flanking parties.

In this work the opposing patrol should be taught that its only object is to delay the march of the advance guard and to avoid destruction or capture.

The advance guard should in turn understand that it is not to change the complexion of the exercise by an ill considered and precipitate pursuit of a weaker force, but should content itself with a cautious advance sufficiently rapid to avoid delay of the march of the main column.

Flanking operations should be preferred to direct advances on positions held by the hostile patrol when the latter entails considerable disadvantages and much sacrifice. Always insist upon the observance of the proper principles.

Dismounted action and direct advances should not be resorted to when turning movements are practicable.

OUTPOST DUTY.

Explanation :

The commander explains :

What outposts are, and the duties with which they are charged.

Classification of duties :

(a) Observation.

(b) Resistance.

General shape of the line of outposts.

Two systems of outposts :

(a) Cordon.

(b) Patrol.

and the combination of the two.

Subdivisions of the outposts :

(a) Sentinels (vedettes).

(b) Pickets.

(c) Supports (illustrate *both* systems).

(d) Reserves.

Line of

(a) Observation,

(b) Resistance,

by whom occupied.

Proportionate strength of subdivisions.

Dispositions and relative distances from each other of subdivisions.

Positions of outposts :

With reference to the main body (distance from) and with reference to the army in general.

How natural features determine the location :

(a) Ridges.

(b) Rivers.

(c) Woods.

Most favorable position—best and worst.

Special disposition where line of outposts is along :

(a) A wood.

(b) An obstacle with few passages (stream, canal).

Considerations governing relative strength, position and duties of :

- (a) Pickets.
- (b) Supports.
- (c) Reserves.

Use and duties of connecting and picket sentinels.

Practical.

The troop is divided into reserve, support and pickets, and the latter is divided into reliefs by the picket commander after reaching the position assigned to his picket.

The commander now gives in the presence of all :

Detailed instruction to his subordinate commanders.

Instruction in posting and in the duties of sentinels and vedettes.

For purposes of illustration and further instruction, the outpost should be posted in the prescribed manner. As soon as sentinels or vedettes are posted, they will be instructed in their duties by noncommissioned officers, supervised by picket commanders; when properly posted and instructed, the picket commanders should notify the outpost commander, who then makes his inspection, questioning vedettes and sentinels as to their orders and duties, changing posts not well located (giving reasons), and giving such additional instruction, information and illustration as may seem advisable.

Picket and connecting sentinels are posted and instructed.

ASSEMBLE THE OUTPOST.

Explanation :

The commander explains to all the use of Cossack posts, in place of pickets and vedettes or sentinels. (It seems proper to observe that the modern tendency is in favor of the use of Cossack posts, as more desirable in all cases, except where a close investment of a fortified place is being carried on, than the use of pickets, sentinels and vedettes).

He then explains the purpose, duties, and composition of visiting (small) and reconnoitering (small or strong) patrols,

tells the men what examining posts are, also explains patrolling posts, and detached posts, giving an outline of the purpose for which each is used, and the duties, location and composition of each.

He explains how the outpost is defended (entrenching, etc.), and shows the necessity and desirability for changes in the outpost at night, the system usually adopted and reasons therefor, how posted, and how the duties are performed.

Practical.

A trooper is detailed to represent the reserve with a flag or other suitable mark, the whole troop is divided into supports, each of which furnishes Cossack posts. The line of outposts is then established as prescribed. Instruct and inspect as before.

Examining and detached posts are detailed from the supports, and posted and instructed. Small reconnoitering and visiting patrols are also detailed, instructed, and sent out.

Assemble the outpost on the supports, and make new dispositions for observation at night.

Several patrolling posts are detailed, instructed and posted.

Repeat this instruction sufficiently often for thorough appreciation and understanding.

REAR GUARD DUTY.

Explanation :

When the duty of the rear guard begins.

Why it is that a retreating army can be protected by a small fraction of itself.

Why it is necessary to organize the rear guard as soon as possible.

By what it is to profit, and what it is to do.

The two courses of action open to the enemy, and the disadvantages of each.

Strength of the rear guard, and the objections to having it too large or too small.

Distance from the main body, and the objection to having it too great or too small.

Formation with illustration.

Features in which different from advance guards :

- (a) Flankers.
- (b) Intermediate bodies.

Practical.

Dispose the troop as a rear guard (indicating the intermediate and main bodies by a flag) and march it along a route affording opportunity for illustrating the methods of taking up successive defensive positions, and of withdrawal from action.

EXPLANATION—*Continued.*

The commander explains :

Composition and general conduct of :

- (a) Artillery.
- (b) Cavalry.
- (c) Infantry.
- (d) Withdrawal from action.
- (e) Patrolling for protection of flanks.
- (f) Advantage over pursuing force.
- (g) Defensive positions, when used.
- (h) How long occupied.
- (i) Contact with pursuing force and how it is maintained.

Defiles:

- (a) Use of, by pursuer and by rear guard.
- (b) How defended:
 - (a) At entrance.
 - (b) At outlet.

Measures for delaying the enemy :

Positive :

- (a) Actual combat.
- (b) Threatened combat.

Negative :

- (a) Bridges, how destroyed.
- (b) Fords, roads, how obstructed.
- (c) Villages, how utilized.

What should be done by rear guard :

- (a) To produce suffering and inconvenience to pursuers.
- (b) With stragglers.
- (c) At each halt.

Duty of rear guard :

- (a) In friendly country.
- (b) In hostile country.
- (c) In forward march.

Practical.

The commander divides the troop into components of a rear guard, assigns duties, and after explaining what pursuing patrols are (their use and duties) details several small ones to personate the enemy.

The troop then makes a retreat with patrols in pursuit, halting as often as is necessary and desirable for corrections and suggestions. The intermediate and main bodies are indicated as before by flags.

This completes the course for the instruction of the troop noncommissioned officers, and with it the instruction of the troop. More attention is paid to the noncommissioned officers with a view to grounding them so thoroughly that they are capable of keeping the privates up to the standard demanded. The "explanations" of the schedule will be the more valuable and more thoroughly impressed on the hearers in proportion to the attractiveness (and value) of the method used in illustration. The terrain table is advocated for the theory until all is understood, eradicating erroneous impressions at the outset. (They are always harder to eradicate afterwards.) The *interest* of the men is the first requisite at this stage, and when it is once aroused the rest will follow in a way most gratifying to the troop commander.

After the combined theory and practice afforded by the terrain table instruction, the memory of each individual trooper is refreshed by a brief rehearsal of the movement for the day, made to the troop collected in the field just prior to

giving the preliminary commands for execution. Each individual can and will move out at once at command, intelligently and confidently.

Hold the men in practice to the principles previously explained and reiterated. The above scheme is perfectly practicable. Inclement weather, instead of being a time for idleness on the part of the men and officers, can be utilized for the terrain table. Noncommissioned officers' school will be eagerly attended by men who accomplish much more than ordinarily, for their hearts are in their work.

It seems needless to remark that an organization provided with a fair theoretical basis (the above schedule will provide it) can accomplish more than double the field work that can be gotten through with by a troop unacquainted with the principles of the security and information of the command.

Since completion of the above essay, attention has been directed in section room work, to the scheme of M. Dubois, for illustration of tactical dispositions, problems, etc.

He uses plates of glass which are primarily placed on a map and marked with ink in such a manner as to indicate the positions of various forces.

By this means, two (or more) men, representing opposing forces with identical maps on which rest the glass plates, make their dispositions under a time limit and according to instructions.

At the end of the period a third individual (umpire), who has a third map identical with that of the others, takes the glass plates of the other two and superposes them over his own map.

At a glance he can determine what opposing forces can be seen by each other, and he marks on each map what each force is able to see of the opposing one. Then the plates go back to their original maps, and the operators have another period to adjust their dispositions to suit the new conditions, etc.

This is, apparently, a most excellent method of illustration, and is to be advocated *after* the terrain table instruction. The reason for not taking it up at once is that it will

hardly be probable that the noncommissioned officers are sufficiently up in map reading to be able to use this instruction intelligently without the preliminary instruction that the terrain table gives. On the latter they first *see* the folds of the ground, etc. Later they are better able to (unconsciously) read the contours and understand the relations they bear to slopes.

M. Dubois' scheme is in reality "Kriegsspiel," and in this country at least, we look upon "Kriegsspiel" more as a means of illustration for commanders, training them to see and recognize, and promptly meet new conditions. It is undoubtedly a valuable addition to our means of illustrating and may be used when the men are able to handle it with the requisite appreciation and intelligence.

GRIERSON'S RAID, APRIL 17TH TO MAY 2D, 1863.

BY LIEUTENANT-COLONEL S. L. WOODWARD, SEVENTH CAVALRY,
FORMERLY MAJOR AND A. A. G., U. S. VOLUNTEERS.

[CONCLUSION.]



CAPTAIN TRAFTON'S advance entered Bahala on a charge and captured an officer of the staff of General Frank Gardner, from Port Hudson. At Bahala, the depot, water tank, steam pumping plant, bridges and trestles near the town, were destroyed. The detachment then started on its journey to rejoin the main column, which Captain Trafton had been instructed would be found in the vicinity of Union Church. After leaving the column for Bahala, he had traveled as much as possible off the road in order to take the town by surprise. On returning he took the shortest route to the trail of the column, and upon striking the road learned that the main body of Wirt Adams' cavalry, with a battery of artillery, had preceded him several hours en route to Union Church, with the intention of coming in rear of Grierson's command while it was engaged at Union Church. They had no idea that there was a force of "Yankees" in their rear. It was indeed a mutual surprise, with the advantage in favor of Captain Trafton, who knew of their presence in advance, while they did not know of his command in their rear. When he learned of this force of the enemy preceding him, it was intensely dark, and he had still thirty miles to march to rejoin the main column, with this intervening enemy to encounter or circumvent. It was necessary to exercise great caution in his march, as well as to use the utmost celerity in order, if possible, to rejoin Colonel Grierson before daylight, or at least notify him of the presence of this force in his rear.

Sergeant Surby, the chief of scouts, with one of his men, Stedman by name, a private of one of the regiments, had been ordered to report to Captain Trafton for this expedition. These two moved continuously in advance of the column, observing everything. The command was ordered to maintain the utmost silence, and every man seemed to realize the necessity for this precaution. A few men rode in advance of the column to convey messages from Surby to the commanding officer, so that it could be halted when necessary, in accordance with a preconcerted arrangement, to give the scouts time to interview any parties they might meet and to obtain information of the inhabitants. Soon after striking the main road, Surby saw a light, apparently outside a house; he approached silently and before he himself was discovered saw an old man on the portico, holding a candle in one hand and shading his eyes with the other, conversing with a mounted man. Surby hailed the old man, asking him to step to the fence, as he wanted to obtain some information from him. The old citizen shambled out to the fence, when Surby asked him "How long since our troops have passed?" The old man replied: "Do you mean Colonel Adams?" Being answered in the affirmative, he gave all the information he had as to the force, its composition, and the hour at which they had passed. It was also ascertained that the mounted man who had disappeared in the darkness, though a stranger to the old citizen, was a Confederate officer inquiring the road to Port Hudson. Surby bade the old man "Good night," saying that his command which was approaching, were reinforcements for Colonel Adams, and they hoped to overtake them early in the morning, and also asked him to inform the mounted man, if he returned, that they were Confederates.

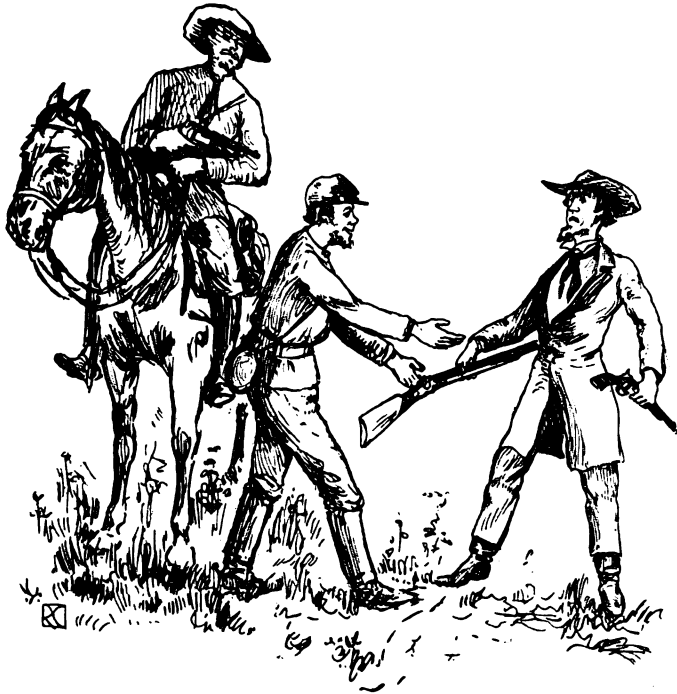
Just as Surby reported to Captain Trafton, a lone horseman came in from the roadside. He was ordered to halt, which he promptly did, saying loudly: "I am all right; I belong to the Confederate army. I heard your conversation with the man at the house." Captain Trafton directed him to advance, which he did promptly. He was armed with a shotgun, which Surby obtained by a ruse to examine it. He

never again saw that gun. Captain Trafton remarked: "This man may be a Yankee." He most emphatically denied the soft impeachment, saying: "No, gentlemen; you are mistaken. I am a lieutenant from Port Hudson, and can tell you all about the post and who commands it, so that you can tell if I am all right." He was a youngster at home on furlough, and incidentally, to visit his sweetheart. He was taken along and was quite voluble. From him Captain Trafton gleaned much valuable information as to the Confederate forces in his front, from which he was enabled to effect the capture of several detachments from the rear of Colonel Adams' cavalry, in each case Surby having approached in the darkness and by his conversation deceived and secured them without a struggle. They were generally induced to accompany the command without knowing they were prisoners in the hands of the Yankees. Of course, their enlightenment came later. During the expedition quite a number of Confederate officers and soldiers were surprised and captured while engaged on the same pleasant duty as the lieutenant from Port Hudson.

During the night, by the accidental discharge of a captured shotgun, Sergeant Vaughn of the Seventh Illinois Cavalry was seriously wounded, so that he had to be left. He was turned over to the tender mercies of the inmates of a house near which the accident occurred, who promised to treat him kindly. I believe he recovered and afterwards rejoined his command.

Soon after midnight the scouts approached a house, which seemed to be the residence of a large planter. A loud knock at the door brought inquiry from within as to who was there. Surby's prompt reply that he was a Confederate soldier who had been sent by his captain to inquire about the road, and how long since Colonel Adams had passed, brought an invitation to enter, light a candle and be seated. The proprietor, Mr. Mosby, was a planter, lawyer and bachelor of large means. His attorney's habit of cross-questioning asserted itself and he interrogated Surby closely as to what command he belonged to and where they were from. By Surby's acuteness his curiosity was satisfied and his suspicions, if he had any, allayed. Being requested to furnish a servant

to guide us, he replied that when he heard the "Yankees" were coming he had sent his negroes away with his horses and mules to save them, but if he had his saddle horse he would gladly accompany the command till they joined Colonel Adams, whom he knew very well, and who had halted at his place for half an hour as he passed; he thought this reinforcement was a "capital idea." He stated that Colonel Adams had about 400 men and about six pieces of artillery.



Being told that he could be well mounted and sent safely back, he consented to go; in fact he was anxious to do so.

About midnight the command came to the intersection of the roads, the left going to Fayette, and thence to Natchez on the Mississippi River, and the right to Union Church, where Colonel Grierson was expected to be found with the main column. At this point the scouts met three men of Colonel Adams' command, two of whom were officers who had left the column to visit friends in the vicinity. Practicing his

usual deceptive methods, Surby learned that the enemy had taken the road to Fayette, where they expected to be joined by the rest of the command and reinforcements from farther west, and, as it was believed that Colonel Grierson was going to Natchez, an ambush was to be prepared on that road.

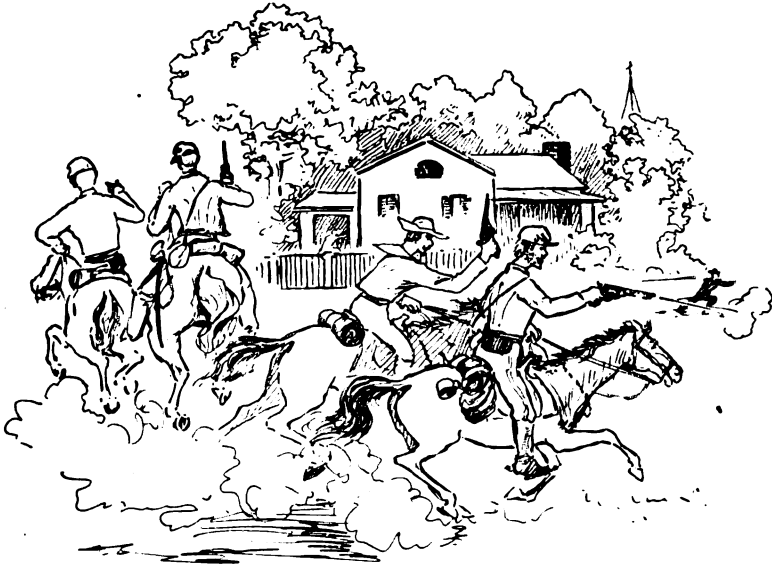
Mr. Mosby being curious about the prisoners he saw brought back, was told they were "Yankees" who had straggled, probably to plunder; he thought their capture a "capital idea," and hoped they would be shot, as they should not be permitted to live. When the command arrived at the point where the roads diverged, he was anxious to know if they intended to follow the "Yanks" or join Colonel Adams. Upon being told by Captain Trafton that he would follow the "Yanks" and send a courier to Colonel Adams, he thought it a "capital idea," volunteered and was anxious to carry the dispatch. He evidently thought his services would be more valuable in carrying a message to his friends than in guiding them into the jaws of the enemy. The commanding officer did not agree with him, however, and he was kept with the column.

Captain Trafton was much relieved to find the road to Union Church unobstructed, and his weary little command continued their march with light hearts, rejoining the main force at Union Church before daylight, having been continuously in the saddle for nearly twenty-four hours, marching over sixty miles and capturing twenty-one prisoners. The main column and other detachments had, in the meantime, covered about thirty miles.

Mr. Mosby, who was nicknamed "A Capital Idea," was much surprised and chagrined when he was called upon to take an oath not to give aid or comfort to the enemies of the United States until properly exchanged. He characterized the proceedings as "a d——d Yankee trick," but was very much mollified when given a horse and equipments to carry him back to his home.

The next morning, April 29th, the command moved out on the road to Fayette and Natchez, and after proceeding a short distance a small detachment was sent still farther on the road to make a demonstration, while the main column

swung off to the southeast, leaving the road and marching through the woods to the road to Brookhaven, which is south of Bahala on the railroad. The detachment which had been sent on the Natchez Road was directed, after demonstrating towards that point and Port Gibson, to return by the shortest route to the main column. Colonel Adams having taken the road to Fayette and Natchez the evening previous, encamped within four or five miles of Grierson's command at Union Church. If he knew of Grierson's presence at that



point he must have heard that a detachment of his command had been driven from there the afternoon before, and concluded it was not prudent to attack. He passed by the flank of Colonel Grierson's command toward Natchez and placed his force in ambush on that road. As only a demonstration was made for a short distance in that direction, he was left in ambush and in blissful ignorance of the direction Grierson had taken until late in the afternoon of April 29th, when, finding Grierson had returned to the railroad, he took the same direction, hoping to intercept him farther south. His efforts, however, came to naught. On this morning the guns of Admiral Porter's fleet, which was bombarding Grand

Gulf, were distinctly heard, but the little command could not dally to await developments. The enemy were concentrating from every direction to envelop it, and its only salvation was rapid movements to deceive them, and long marches.

After striking the main road to Brookhaven numbers of oxen and mule teams were met, loaded with supplies for the Confederate forces at Port Gibson and Grand Gulf. These were all destroyed. A number of prisoners were also captured. It was understood that there was a camp of instruction at Brookhaven with from 500 to 1,000 men, and that there might be some opposition at that place. The commanding officer had no fear of meeting such a force, however, and he determined to attack and break it up. As the column approached the town along the wide road with dense woods on both sides, a single shot was heard on the left and front, doubtless a signal of its approach. The advance guard charged in column of fours through the town, completely enveloping it, the troopers in their wild dash separating by twos at the cross streets and firing from their horses at every man in sight. The camp of instruction was about one and one-half miles south of the town in a beautiful grove of live oak, a most admirable location. A part of the command proceeded rapidly and charged wildly through it. This cantonment of rude frame buildings had accommodations for 1,200 or 1,500 men and had been garrisoned until the day before by about 800 men, mostly conscripts inferiorly armed. In anticipation of Grierson's cavalry coming that way they left the day before. It was afterwards learned that orders had been sent to the commanding officer to scatter his men through the country to prevent their capture. A number of arms and a large quantity of ammunition and other public stores were found here and in the town. These were all destroyed, to accomplish which it was necessary to burn the railroad depot. The fire was so fierce as to endanger some private dwellings, but a detail was made from the command, with an officer to direct, which, with buckets and other appliances, succeeded in preventing the destruction of any private property. Over 200 officers, soldiers and able-bodied citizens, who were captured

in and about the town, were paroled. Indeed, when it was ascertained that the captives were being paroled and released instead of being carried away, it was surprising to see the eagerness with which every man liable for military duty, sought one of the papers which exempted him until exchanged. Many who had escaped and were hiding out were brought in by their friends to obtain one of the valuable documents. The citizens generally expressed great surprise and gratitude at the treatment accorded them.

Among the prisoners captured here was a newly fledged lieutenant in a bright new uniform bedizened with gold. He was visiting some young ladies, and as the advance dashed through the town, he attempted to escape. As he was astride the back fence two troopers espied him and fired upon him. When he was delivered to the paroling officer, his desire for war and deeds of glory had vanished like water through a sieve.

After making a complete wreck of the railroad for some distance each way, the column, about dark, moved south about eight miles to the plantation of Mr. Gill, where sufficient forage being found, it bivouacked for the rest of the night, having marched about forty miles since the last rest.

April 30th, the march was resumed southward along the railroad to Bogue Chitto, thence to Summit, destroying every bridge, trestle and water tank en route. At Bogue Chitto, the depot and fifteen cars, all filled with public stores, were destroyed. A large Confederate flag was also captured. The bridges and trestles from Brookhaven to Summit were very extensive, and after their destruction, the road was never again of use to the Confederate government. News of the treatment accorded the people at Brookhaven had reached Summit, and the inhabitants of this pretty little town did not seem especially alarmed at our approach. Much Union sentiment seemed to exist, and the population generally were friendly. Prisoners captured during the day and citizens in the town liable for military duty were paroled, as at Brookhaven.

The railroad station and about twenty-five cars were found laden with supplies, sugar, bacon, salt, meal and

molasses. As the destruction of the station by fire would endanger the town, the stores therein were carried out, the citizens invited to help themselves to what they needed for their own consumption, when the remainder was loaded into empty cars, pushed beyond reach of harm to the town and burned. A silk flag inscribed with the mottoes, "God and our rights," "Fort Donelson," "Shiloh," was also found. The people were profuse in their thanks for our generosity and kind treatment.

About sunset the command left Summit and the railroad and marched southwest towards Liberty, halting for rest and food at midnight, about fifteen miles from Summit, on the plantation of Dr. Spurlark, having covered about thirty-five miles.

The demonstrations in different directions were the means of scattering the forces of the enemy in their efforts to intercept the command in the different places towards which their dispatches and couriers reported it had gone. The movement toward Natchez had drawn all available cavalry south on the direct line of march toward that point, so that they were beyond the control of General Gardner, commanding Port Hudson, and the subsequent destruction of the railroad from Brookhaven to Summit led him to believe it to be Grierson's intention to continue down that road to Magnolia and Osyka, at both of which points there were large accumulations of stores. At Osyka, too, there was already a considerable force and camp of instruction. General Gardner, therefore, ordered every available force from Port Hudson and other places to rendezvous at this latter point.

On the morning of May 1st the march was resumed southwest towards Liberty, but soon after starting the column left the road abruptly, marched due south through dense woods interspersed with fallen trees, so that it was necessary to lift, by hand, the little artillery over them. After traveling several miles in this way, a dim road, but little used, was intersected, which led in the desired direction. This movement was also intended to again threaten the railroad at Magnolia and Osyka, and was also to deceive any couriers or scouts that might be on the watch. From

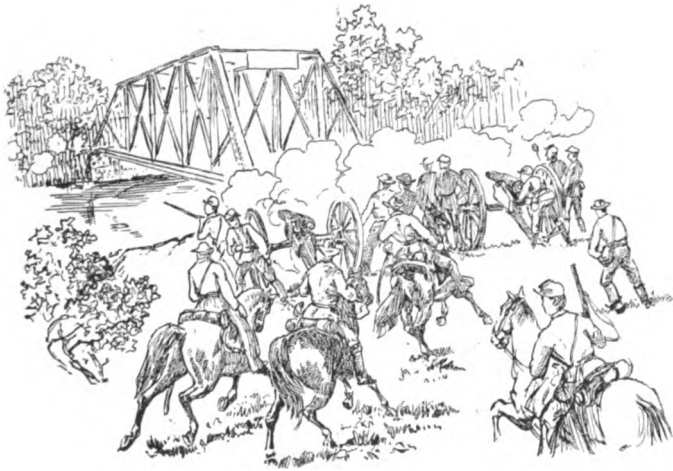
the report of Colonel R. V. Richardson (Confederate), dated Osyka, May 3, 1863, it appears that a courier brought him word that the column had left the road to Liberty and taken that to Osyka.

About noon the main road from Port Hudson to Osyka was struck at a right angle a few hundred yards west of where it crosses the Tickfaw River at Wall's Bridge. This is a deep, abrupt, rapid stream, not fordable, and completely hidden by a dense growth of vines and bushes. The road making a curve after crossing the bridge, it was impossible to see any distance in advance. When the scouts came to this road, they found evidences of a considerable force of cavalry having recently passed, going east to Osyka. The column was halted to give time to reconnoiter. Sergeant Surby approached the bridge and found a picket of three men stationed there. He engaged them in conversation, ascertained to what command they belonged and their number. It was a detachment of about one hundred men of Colonel Wingfield's battalion of cavalry, under Captain Scott, en route to Osyka. They had halted for a noon rest and to feed. While Surby was conversing with the men, several shots were fired off to the right. This was occasioned by a small party on the right flank approaching a house where they found several saddled horses tied in the yard and the riders in and about the house. The party charged them, capturing all of the horses and two of the men. The firing, however, alarmed the pickets, and Surby and his comrades disarmed them and brought them back to the column. He immediately returned towards the bridge and saw two more mounted men approaching; these were Captain Scott and a comrade. Surby and one of his men rode forward and conversed with them, allaying any suspicion they had as to the cause of the firing by telling them it was caused by their pickets firing upon the advance of the reinforcements, who were en route to Osyka to protect it against the "Yankees." Captain Scott and his companion were quickly disarmed and sent to the rear. At this juncture, the column having been halted for some time awaiting the reconnaissance of the scouts, and from information obtained from them and the prisoners, it

being evident that there was considerable force in our front, Colonel William D. Blackburn, who was in command of the advance battalion, asked permission to ride forward, clear the bridge and ascertain the character of the force in our front. Colonel Grierson gave him the necessary order, and warned him to proceed cautiously, as it was uncertain what force was in front. It was not Colonel Grierson's intention to be drawn into a general engagement with a large force, which would cause a delay long enough for the enemy to concentrate the commands following and trying to intercept us from every direction, as well as to incumber his command with dead and wounded; but rather, while presenting a bold front and developing their strength, to pass by their flank.

Colonel Blackburn rode rapidly and recklessly forward, followed by three or four of the scouts, and dashed across the bridge. Several shots were fired as they approached, while Lieutenant Stiles of the Seventh Illinois, with the advance guard, charged upon the bridge after Colonel Blackburn, and was met by a withering fire at short range. Those not killed or wounded retreated in some confusion. Two troops were quickly dismounted, deployed and began firing through the dense foliage without being able to see the enemy, and two guns of the battery were unlimbered and threw a few round shot and cannister in that direction. In a few moments a party of dismounted skirmishers were cautiously advanced across the bridge, to find that, after firing one volley, the enemy had precipitately fled. A strong detachment was sent to pursue them rapidly. Colonel Blackburn was found near the bridge seriously, and as it afterwards proved, mortally wounded, his horse, a large, powerful animal, dead and lying partly upon the Colonel. Colonel Blackburn was wounded in the head and thigh, and his horse had received twenty or more bullets. One soldier was dead, and Sergeant Surby and two others seriously wounded, one of whom afterwards died. Colonel Blackburn was quickly relieved from his predicament, and he, with the other wounded and dead soldiers, were taken to the nearest house, that of Mr. Newman, where the dead soldier was buried and the wounded disposed

of as comfortably as possible, with the warning to the people to treat them properly under pain of future punishment. Suffice it to say, that they were given all possible humane and proper treatment. All the wounds were too severe for the men to be taken with the column. Precaution was taken to change Sergeant Surby's clothing from his citizen's dress to uniform, as otherwise he would have been subject to treatment as a spy. A surgeon and two men as nurses were detailed from the command to remain with them. Colonel Blackburn and one of the wounded soldiers died a few days after the fight.



The road over which the enemy had fled was found, as far as the pursuing party followed them, strewn with saddles, blankets, hats, coats and firearms, indicating that after firing their one murderous volley they had been seized by an uncontrollable panic. They never pulled rein until they had reached Osyka and reported Grierson's approach towards that point. It was not the commanding officer's intention, however, to again attack the railroad or be diverted from the object of reaching the Union line at the nearest point. The powers of endurance of the command, marching day and night, fighting, destroying railroads, etc., had been taxed to the utmost, and he knew full well that rest and recuperation

were necessary and that further enterprises would be reckless, and invite disaster.

From all information obtainable, it was known that every available force was marching from all directions towards Osyka to save that important point. During the engagement at Wall's Bridge, "Miles' Legion," a force of infantry and artillery far outnumbering Grierson's, was approaching from Port Hudson, and according to the official reports of Colonel Miles when he arrived on the scene of the engagement a few hours afterwards, he found the cavalry commands of Colonel Wirt Adams, Lieutenant-Colonel G. Gantt and Lieutenant-Colonel C. C. Wilburn, all of whom had been in pursuit and abandoned it at this point. Colonel Miles did likewise, and at the urgent request of Colonel J. M. Simonton, in command at Osyka, who was fearful for the safety of his command, he proceeded to that station, where other forces of the enemy had already concentrated. At Osyka also arrived later Colonel R. V. Richardson, with a force of about 500 men. According to his official report of May 3, 1863, from Osyka, to General Pemberton, he had been ordered to embark on cars at Jackson, Mississippi, on the evening of April 28th, with the men and horses of three companies of the Twenty-Ninth Mississippi Mounted Infantry, proceed by rail to Hazelhurst, where Grierson had last been heard from on the railroad, and with the assistance of other forces which were to report to him, to follow or intercept. After much delay in leaving Jackson, on account of inefficient railroad service and lack of enthusiasm on the part of the conductor, engineer, etc., he did not reach Hazelhurst until about noon on the 29th, during which time Grierson had marched to Union Church, whipped the detachment of Wirt Adams' command, made the demonstration towards Natchez and doubled back to the southeast, and was then at or near Brookhaven.

At Hazelhurst, Colonel Richardson was met by an excited citizen who reported "a thousand Yankees a quarter of a mile from town." He ran his train back, dismounted his command and formed for attack, sending twenty men mounted to reconnoiter. He soon found the report false, no Yankees having been there for at least forty-eight hours.

He heard that they had been at Bahala on the railroad the previous evening, and also that they had engaged Wirt Adams at Union Church that morning and were going to Natchez. They were reported to be in so many different places and directions at the same time, that he was somewhat mystified, but decided that they had abandoned the line of the railroad and were on their way to Natchez. He accordingly decided to go to Union Church, as well to get upon the trail as to gather up the rest of the forces which were to constitute his command. Upon his arrival at that point, he sent dispatches to Colonel Adams, informing him of the route Grierson had taken, with directions to join him in the direction of Liberty, and himself proceeded towards Brookhaven, gathering up some scattered detachments on the way. But his pursuit amounted to nothing. All he saw of Grierson's cavalry was their work of destruction. He continued, however, along the railroad from Brookhaven to Osyka, viewing the destruction that had been accomplished as far as Summit. At Osyka, he saw a dispatch from Colonel Adams to the effect that he (Adams) had sent an officer (Captain Wren) to destroy Williams' Bridge across the Amite, and was en route for that point with his command. Colonel Richardson accordingly followed with all the force he could muster, striking the trail near Greensburg about the time the Illinoisans were being enthusiastically welcomed by their friends in Baton Rouge. This ended his pursuit.

After burying the dead soldiers and making all possible arrangements for the care and comfort of the wounded at Walls' Bridge, the column moved rapidly south on the road to Greensburg, Louisiana, recrossing the Tickfaw to the west side at Edwards' Bridge. At this point it met and engaged a command of Confederate cavalry under Major W. H. Garland. They were surprised and easily driven off by the advance battalion and two guns of the battery with considerable loss on their side in killed, wounded and captured. There were no casualties on the Federal side, and no delay in the march, the battalion engaged simply falling in the rear of the column after scattering the enemy.

In order to reach the Union line at Baton Rouge, it was necessary to cross the Amite River, a wide, deep and rapid stream, with only one bridge, Williams', which was in exceedingly close proximity to Port Hudson. Up to this time Colonel Grierson had hardly hoped to be able to reach it before it was destroyed or sufficient force should be placed there to effectually prevent his passage. Upon arrival at Greensburg, from information obtained there and from captives, he believed he was so far ahead of the news of his approach that it was possible the crossing could successfully be made at Williams' Bridge. The column accordingly pushed on with as much rapidity as possible, surprising and capturing couriers as well as officers and soldiers absent from their commands, and from whom much valuable information was obtained as to forces yet to be confronted. The bridge was reached about midnight. Upon inquiry of a citizen, who was with some difficulty awakened, a half mile from the bridge, it was learned that at dark that night there was no force at the bridge, except a small courier force at a house a few hundred yards from the river on the Port Hudson Road. As it was the intention to take the left hand road to Baton Rouge after crossing the bridge, it was thought prudent not to awaken this detachment (whom it was learned were likely to be asleep in the house) lest some one might escape and carry news to the enemy who might be in front. A large force of infantry and artillery was sent from Port Hudson to guard this bridge and intercept the column. Not dreaming of the celerity of the movements, they tarried on the way and arrived too late. The bridge was approached with some trepidation, but crossed in safety, and the weary column proceeded on its journey without the knowledge of the couriers until after daylight the next morning.

Just before daylight, as the scouts approached the bridge across Big Sandy, a pretty, rushing stream, they espied the tents of a large camp upon the opposite side; reconnoitering carefully, they discovered no pickets or guards and no special signs of life, except two negroes about the campfire. They reported their discovery to Colonel Grierson, who dismounted one troop to proceed quietly and cau-

tiously across the bridge and deploy towards the camp; another troop was advanced mounted to support it. The dismounted troop fired a volley into the camp, and then charged through it, yelling. It is needless to say the occupants of the camp were paralyzed with terror. Only one is known to have escaped and he, from his own statements, dressed only in underclothing, mounted a horse bareback and never drew rein till he reached his home sixty miles.

This was a camp of about 800 men, the command of Colonel Hughes. The effective force was absent, having been drawn northwest towards Natchez by the demonstrations from Union Church towards that place, leaving about seventy convalescents and camp guard, all of whom, with the exception noted, were captured. The camp was beautifully located along the bank of the stream, and consisted of about 150 tents, with every appliance for comfort, large quantities of ammunition and other stores, as well as many stands of arms. These were all quickly destroyed, the command only halting long enough for that purpose. The country hereabout, with its beautiful groves, the trees laden with the grey moss characteristic of Louisiana, was very attractive, and as the day dawned, it seemed to inspire the men with renewed life and spirits, especially in view of the great success thus far, and of the fact that they knew the danger line had been passed and that this was the beginning of the end of the great raid.

Having completed the destruction of this camp, the command moved rapidly towards Comite River, seven miles away, the last barrier between it and Baton Rouge. The scouts in advance described a camp near the river, men moving about and horses grazing. Three columns, of two troops each, were quickly formed and deployed some distance apart, the center column having as its objective the horses and men in sight, and the others going on either flank. These, each in columns of fours, simultaneously charged wildly down on the unsuspecting enemy, who were picketing towards Baton Rouge, and were totally unprepared for such an onslaught in their rear. They were evidently at breakfast. They fled in the wildest confusion, leaving

arms, horses, clothing, and in fact everything except their precious bodies, each seeking his own personal safety. The columns coming in on the flanks and the main command quietly bringing up the rear, prevented any possibility of their escape, and the only man of the command who did escape was the commanding officer, who bethought himself to climb a tree and conceal himself in the thick foliage. He was not discovered. One troop ran on to eighteen concealed in a dense arbor of vines and captured the entire party. This was Captain Bryan's company of Stuart's cavalry, and was composed of the scions of the aristocracy of that part of Louisiana. They, as well as the troops whose camp had been destroyed earlier in the day, were on outpost duty from Port Hudson, watching the Federal forces at Baton Rouge. About forty men with their horses and all equipments were captured. As soon as everything was destroyed which could not be taken, the command forded the Comite River, which was deep enough to swim the small animals. Proceeding about five miles, abundance of provisions and forage were found on a plantation, and as neither men nor horses had been fed since the morning of the day before, Colonel Grierson decided to halt, feed and rest for a few hours, the more especially as he knew his command was not expected in Baton Rouge and would not be prepared to entertain so many unexpected and hungry guests.

When the command halted, an orderly at headquarters who was evidently asleep on his horse, continued on the road to Baton Rouge and rode into the pickets. The appearance of a single cavalryman in Federal uniform was rather a surprise to the guard, and upon being questioned the orderly stated that he belonged to the Seventh Illinois Cavalry; he was discredited, and it was thought some ruse was being attempted by the enemy. He was sent to the commanding general, Brigadier-General C. C. Augur, who sent two troops of cavalry under Captain J. F. Godfrey to investigate. The commanding officer deployed a line of skirmishers and advanced upon the bivouac very cautiously. Being met by vedettes and assured of the identity of the command, Captain Godfrey welcomed it most cordially and sent word to

General Augur what command it was, and from whence it came. The march to Baton Rouge was resumed, the command reaching there about 3:00 o'clock P. M.

The news of its coming had been heralded through the city and the streets were lined with soldiers and citizens who vied with each other in the manner of their welcome. The command certainly presented an interesting appearance as it marched in, the troops in columns of fours, with drawn sabers, one regiment in advance the other in the rear. Between the two were the battery, prisoners, several hundred negroes, each leading several animals besides the one he was riding, and a number of vehicles of various descriptions carrying the sick and wounded, of whom there were about twenty. The indisposition was generally caused by swelling



of the legs from continuous riding. The battery especially presented a ludicrous appearance. The wheels were originally poorly constructed and nearly all had broken down at some stage of the journey. They had a peculiarly short hub. They were replaced by light wagon wheels which were found from day to day, the hubs being sawed off and bands shrunk on; but there was scarcely any two wheels of the same size, so that the guns had an odd, wobbly motion, giving one the idea of a huge bug ambling along. Sometimes a gun had to be carried several days in a captured wagon until suitable wheels could be obtained. Such was the affection of the command for this battery that the idea of abandoning any part of it because it was disabled could not be thought of.

The enthusiasm of the crowds, which met the column half

a mile from the city and lined the streets as it passed, knew no bounds. With waving of flags, banners, handkerchiefs and everything available, the entry into this beautiful Southern city was indeed triumphant. The march was directly to the Mississippi River to water the horses, thence to a beautiful magnolia grove on the outskirts of the city. Since the morning of the day before the command had marched without rest or food, except at the place referred to near Baton Rouge, during which time it covered over eighty miles, passed almost under the guns of the stronghold of Port Hudson, had four engagements (in each case routing the enemy) captured two camps and forded an almost impassable stream. It is needless to say that all appreciated the fact that they were once more within friendly lines and could sleep with assurance. The garrison at Baton Rouge were most profuse in their hospitality, regiments volunteering to furnish coffee and food to the weary troopers from Illinois, and in every possible way contributing to their comfort.

The result of this most extraordinary and successful expedition were twofold. The original object, to pierce the heart of the Confederacy, cut lines of communication, destroy things which could be of value to the enemy of the country in the prosecution of a war, and generally to strike them with terror and discouragement, had been accomplished beyond the most sanguine expectation of the participants and their friends, who were anxiously looking for the outcome. The Confederacy was, for a time at least, cut in twain, Mississippi and the trans-Mississippi being separated from the middle and eastern departments, and the only two great strongholds of the enemy on the Mississippi, Vicksburg and Port Hudson, being isolated from each other.

The assistance rendered to General Grant and his army after they had gained the east bank of the Mississippi below Grand Gulf, was incalculable, and was often acknowledged by the great commander in his reports and dispatches. All the cavalry of the enemy throughout the States of Mississippi and Eastern Louisiana, which would otherwise have been used against his flanks and lines of communication,

were drawn into wild goose chases and scattered to the four winds in futile attempts to circumvent and capture Grierson.

The commands of Generals Chalmers, Ruggles and others in Northern Mississippi and Alabama were employed in watching for the return of the Illinois cavalry to Tennessee, while those of Wirt Adams, Hughes, Wilbourne, Garland, Miles' Legion and many others were, in the same manner, fully occupied to prevent Grierson from reaching Baton Rouge. All troops from Pass Christian on the Gulf of Mexico were ordered to intercept. (See dispatch of General W. W. Loring to General Pemberton, page 787, Volume 24, Series 1, No. 38 Rebellion Records.)

It is only necessary to refer to the official reports and dispatches of these several commanders as published in the Rebellion Records to show the intense excitement and consternation which this little command produced throughout the length and breadth of the State of Mississippi. Mr. Jefferson Davis, in his book, "A Short History of the Confederate States," characterizes it in this language: "Among the expeditions for pillage and arson, this stands prominent for savage cruelties against defenseless women and children, constituting a record unworthy a soldier and a man." The disgruntled, garrulous and untruthful nature of this allegation is simply on a par with the general tenor of his book. No report or writing of the great generals of the Confederacy, J. E. Johnston, Pemberton, Gardner or others, who were immediately cognizant of the conduct of Grierson's Raid, have ever in the remotest manner attributed to it any destruction of property or hardship upon persons not strictly warranted by the law and usages of civilized war, and certainly the people along the line of its march, who came in direct contact with the command, after their first fears were allayed, exhibited much greater fear of Mr. Davis' conscripting officers and their posses than of the "Yankee cavalry."

The eyes of the middle classes, who had been greatly deceived by their politicians and leaders, were opened, and their influence, through letters to their husbands, sons and brothers, who were in the ranks of the Confederate army,

relating the kind and generous treatment and protection accorded them, was farreaching.

Be it said to their credit, each man in the command seemed to realize the importance and gravity of the situation, and all worked with the utmost zeal for the success of the expedition.



Acts of pillage and insubordination of any description were rare, and it was seldom necessary to administer even a reprimand. During the sixteen days the main column marched about 650 miles, and the detachments, which from time to time embraced nearly every man in the command, covered from 150 to 200 miles more.

Eight hundred miles is a safe and modest estimate of the distance traveled. The casualties in the command were four killed, three wounded (one accidentally), a surgeon and two men left as attendants on the wounded, and nine captured.

For proper understanding of the magnitude and influence of this expedition upon subsequent events in the West, especially the campaigns against Vicksburg, Port Hudson and the trans-Mississippi, it is but fair to quote a few extracts from the numerous dispatches and reports of Federal and Confederate commanders upon the subject.

EXTRACTS FROM REPORTS, DISPATCHES AND LETTERS OF
COMMANDING GENERALS OF THE U. S. ARMY.

General Grant to General Hurlbut, February 13, 1863:

"It seems to me that Grierson with about 500 picked men might succeed in making his way south and cut the railroad east of Jackson, Mississippi. The undertaking would be a

hazardous one, but it would pay well if carried out. I do not direct that this shall be done but leave it for a volunteer enterprise."

Grierson undertook and accomplished it.

General Grant to General Hurlbut, March 9, 1863 :

"The object will be to have your cavalry move southward from La Grange in as large a force as possible, but in reality to cover a move of a select portion of the cavalry which will go south and attempt to cut the railroad east of Jackson. I look upon Grierson as being much better qualified to command this expedition than either Lee or Mizner."

Report of General Hurlbut to General Grant, April 17, 1863 :

"Grierson's cavalry expedition started at daylight from La Grange. I do not expect to hear from him for fifteen or twenty days, unless from Southern papers. God speed him, for he has started gallantly on a long and perilous ride. I shall anxiously await intelligence of the result."

Report of General Hurlbut to General Grant, April 20, 1863 :

"Grierson will cut the railroad, if he lives, at or near Chunky Bridge, about Wednesday night or Thursday."

Dispatch of Brigadier General William Sooy Smith to General Hurlbut, April 29, 1865 :

"A scout by the name of Bell is just in from Jackson, Mississippi. He says Grierson has destroyed twenty miles of the Southern Railroad, having burned thirteen trestles, destroyed one tunnel and captured three trains of cars."

Reports of General Hurlbut to General Halleck, April 29, 1863 :

"Scout just in from Jackson, Mississippi, reports that Grierson has destroyed twenty miles of Southern Mississippi Railroad, burning thirteen trestles, destroying one culvert and capturing three trains of cars. The enemy are gathering near Okalona to intercept his return. I have sent 1,200 men this morning from La Grange to take them in rear and help Grierson. His orders are to return by Alabama. If accomplished as reported, it is a gallant thing."

Letter of General W. T. Sherman to General F. P. Blair,
May 3, 1863 :

"It was Grierson who made the cavalry raid to Meridian, and he is supposed to be traveling toward Baton Rouge or Dixie. It has produced a sort of a panic South "

Report of General Hurlbut to General Grant, May 5, 1863 :

"Thus our gallant soldier Grierson proceeded with his command unchallenged, and has splendidly performed the duty he was sent upon. I very earnestly support his claim for promotion, earned by a long and meritorious service, and now crowned by this last achievement. I trust he will be able to join the main army below Grand Gulf; if not, he will go to Banks. In either event, he will be a gain to the part of the army he may join. If it be practicable, I strongly request that he and his command may be sent to me."

Letter from Brigadier General H. T. Reed to General Grant, May 12, 1863 :

"An unnaturalized Englishman arrived here this morning from Yazoo City, says the people of Yazoo City were greatly troubled about Grierson's raid on the Jackson & New Orleans Railroad, and thought it surpassed anything done by Morgan or Forrest."

Letter from General Grant to General Banks, May 25, 1863 :

"Colonel Grierson would be of immense value to me now. If he has not already started will you be kind enough to order him here immediately. He should come up the Louisiana shore to avoid delay."

Letter from General Banks to General Grant, May 29, 1863 :

"Colonel Grierson's cavalry is of great importance. It is now the only cavalry force we have. He has rendered us great service, and his immediate departure will entirely cripple us. I hope to avoid a separation from him by joining you at the same time he moves, upon the plan I have suggested."

Letter from General Grant to General Sherman, July 13, 1863 :

"I have written to Banks to send Grierson up, but do not believe he will send him."

Letter from General Grant to General Sherman, July 17, 1863.

"Grierson will be here in a day or two and I will then add him to your command."

Letter from General Grant to General Sherman, July 18, 1863.

"A portion of Grierson's command passed here to-day with rebel officers. The remainder will be up in a day or two and will go on to west Tennessee to join their commands. Grierson is very anxious to get back there to get his troops together. He has no whole company together with him. By having him there, I can organize a large raid through the eastern part of the State or wherever required."

(Grierson's command, the Sixth and Seventh Illinois Cavalry, had, at that date, been separated from their camps and baggage, which were left at LaGrange, Tennessee, over three months.)

Letter from General N. P. Banks to General H. W. Halleck, commanding the United States army, dated May 31, 1863:

"I beg to invite the special attention of the General in Chief and the War Department to the valuable services rendered me by the excellent officer, Colonel B. H. Grierson, Sixth Illinois Cavalry, and the Sixth and Seventh Regiments of Illinois Cavalry under his command, since, by the most brilliant expedition of the war, they joined the forces under my command. The moral effects of that most remarkable expedition upon a wavering and astonished enemy, and the assistance rendered us in breaking up the enemy's communications, in establishing and in covering the concentration of our forces against this place (Port Hudson) can hardly be overestimated. Their timely presence has supplied a want which you will remember I have frequently represented was crippling all our operations. I trust the services of Colonel Grierson and his command will receive, at the hands of the government, the acknowledgment which they so eminently deserve."

Letter from General Grant, commanding the armies of the United States, to General Canby, commanding Military Division of West Mississippi, dated February 9, 1865:

"I have ordered General Grierson to report to you to take the chief command of your cavalry operating from Mobile Bay. I do not mean to foster on you commanders against your judgment or wishes, but you applied for—— I suppose for that service. I have no faith in him, and cannot point to a single success of his, except in his reports. Grierson, on the contrary, has been a most successful cavalry commander. He set the first example in making long raids, by going through from Memphis to Baton Rouge. His raid this winter (December, 1864 and January, 1865) on the Mobile & Ohio Railroad, was most important in its results and most successfully executed. I do not think I could have sent you a better man than Grierson to command your cavalry on an expedition to the interior of Alabama. Unless you go yourself, I fear your other troops will not be so well commanded. What is wanted is a commander who will not be afraid to cut loose from his base of supplies and who will make the best use of the resources of the country. An army the size of the one you will have can always get to some place where they can be supplied if they should fail to reach the point started for."

EXTRACTS FROM OFFICIAL REPORTS AND DISPATCHES FROM
CONFEDERATE COMMANDERS IN RELATION TO GRIERSON'S
RAID AND EFFORTS TO INTERCEPT HIS COMMAND.

"JACKSON, MISS., April 24, 1863.

"Brigadier General John Adams, Commanding, etc.:

"GENERAL:—The Lieutenant General Commanding directs that you order the 15th and 26th Mississippi regiments and one battery Point Coupee artillery, now near Jackson, to move at once by the Southern Railroad to Morton, the station this side of Forrest, under command of the senior officer in the regiment. He will move his force to Forrest or Lake, or to such point as the circumstance or position of the enemy make necessary. They have certainly been at Lake Station.
J. C. PEMBERTON."

"JACKSON, MISSISSIPPI, April 24, 1863.

"Brigadier General Adams:

"You will return to this place with your command at once unless you have information which makes it highly import-

ant for you to remain. If possible communicate with General Loring and advise him to return also. Communicate with General Johnston (J. E.), informing him of our situation and urging him at once to send 2000 cavalry to fall in the rear of the enemy. Also with General Buckner (at Mobile) urging him to send up the road a regiment to Meridian.

"J. C. PEMBERTON."

"ENTERPRISE, MISSISSIPPI, April 24, 1863.
"General Pemberton :

"Enemy demanded the surrender of this place, which was refused by Colonel E. Goodwin. General Loring has arrived and enemy is retreating.

"MILTON BROWN,
"President Mobile & Ohio Railroad."

[NOTE:—The force demanding this surrender was Captain Forbes with about thirty-five men.]

The following was Colonel Goodwin's reply :

"ENTERPRISE, MISSISSIPPI, April 25, 1863.

"Colonel Goodwin, commanding Confederate forces, sends compliments to Colonel Grierson, commanding U. S. forces in the vicinity, and asks one hour to consider his proposition to surrender."

"JACKSON, MISS., April 24, 1863.
"General J. R. Chalmers, Panola, Miss.:

"Move with all your cavalry and light artillery via Oxford to Okalona to intercept force of enemy at Newton on Southern Railroad.

"J. C. PEMBERTON."

"JACKSON, MISS., April 24, 1863.
"Major General Gardner, Port Hudson, La.:

"A raid of the enemy, some 700 strong, reached Southern Railroad this morning, and it is possible that they are making their way to join Banks. Send all your disposable cavalry in direction of Tangipahoa to intercept him.

"J. C. PEMBERTON."

JACKSON, MISS., April 24, 1863.
"Colonel J. M. Simonton, Ponchatoula, La.:

"You must make a flank movement to Tangipahoa if it is threatened. Cannot spare a regiment from Port Hudson."

"J. C. PEMBERTON."

General Lloyd Tilghman to General Pemberton:

"CANNON, MISS., April 24, 1863.

"Messenger to Major Cummins (General Maury's staff), courier from Philadelphia, Neshoha County, reports 700 Federal cavalry at Philadelphia yesterday afternoon. Cummins falls back behind Yockanock River with train at Lafore's Ferry."

General J. E. Johnston to General S. Cooper, (Adjutant General C. S. A.):

"TULLAHOMA, April 25, 1863.

"Major General Loring at Meridian and Brigadier General Adams at Newton Station report that about 300 Federal cavalry came to that station yesterday morning, destroying two engines and trains and cutting telegraph line."

General J. E. Johnston to General J. C. Pemberton:

"TULLAHOMA, April 25, 1863.

"Is there not a regiment of cavalry at Columbus, Miss., to intercept that of the Federals just reported at Newton Station?"

General J. C. Pemberton to General John Adams (three dispatches, all dated Jackson, April 25, 1863):

"You say in your dispatch to General Buckner, 'All is lost unless, etc.' Correct it. I never authorized you to use such an expression."

"Be on the alert. Enemy probably return from Enterprise by way of Newton. Bright lookout at night."

"Do not move to Morton, but carry out my instructions of this afternoon."

General John Adams, Lake Station, Southern Railroad, to General Pemberton:

"LAKE, April 26, 1863.

"I have about 100 mounted men scouting in parties. Report enemy 800 fifteen miles south. Expected to strike here or Forrest Station. Fear if I leave for Forrest enemy will come here."

General Pemberton to General Chalmers, who commanded in North Mississippi:

"JACKSON, MISS, April 26, 1863.

"Move with all your cavalry and light artillery via Oxford to Okalona to intercept force of enemy now at Newton on Southern Railroad."

General Pemberton to Captain R. C. Love, Brandon, Mississippi:

"JACKSON, MISSISSIPPI, April 26, 1863.

"Ascertain where enemy is and go in that direction. You will not stay at Brandon, but if enemy is at Raleigh, go there and get on his rear and plant ambush and annoy him. See if something can be done."

General Pemberton to General J. E. Johnston, Tullahoma, Tenn.:

"JACKSON, April 27, 1863.

"However necessary cavalry may be to army of Tennessee, it is indispensable to me to keep my communications. The enemy are to-day at Hazelhurst on New Orleans & Jackson Railroad. I cannot defend every station on the road with infantry. Am compelled to bring down cavalry from Northern Mississippi here, and the whole of that section is, consequently, left open. Further, these raids endanger my vital position."

General Johnston to General Pemberton:

"Cavalry from Mobile is directed to operate in enemy's rear. Am sorry you did not sooner report raid in Southern Mississippi."

General S. Cooper, Adjutant General, to General Pemberton:

"RICHMOND, April 27, 1863.

"Impossible to comply with your wish respecting cavalry. Enemy's fleet still on the coast of the Carolinas and not expected to move south of Florida."

General Pemberton to General John M. Bowen, Grand Gulf, Mississippi (three dispatches all same date):

"JACKSON, April 27, 1863.

"The raid on the enemy is reported three miles west of Westville last night. It is possible they may be making for Hazelhurst and Grand Gulf to fall on your rear."

"Collect Wirt Adams' cavalry and send them out to meet the enemy who were at 12 o'clock to-day at Hazelhurst.

Follow them up without delay, annoy and ambush them; if possible move rapidly."

"Which way the enemy will move from Hazelhurst is only a matter of conjecture; Port Hudson or Big Black Bridge most probable."

General Pemberton to Major M. R. Clark, Brookhaven, Mississippi:

"Send a messenger to Captain Wren. Tell him to ascertain the position of the enemy and move in direction of him. Try to ambuscade him and annoy him, particularly at night in his camp."

(Note.—It was hard to find Grierson in camp at night.)

General Pemberton to commander of cavalry from Port Hudson at Tangipahoa, Louisiana:

"APRIL 27, 1863.

"Move up north with your command and be guided by such information as you receive en route."

General Pemberton to Colonel T. P. Dockery, Big Black Bridge, Edwards Depot:

"APRIL 27, 1863.

"General Stevenson will send cavalry to cooperate with you. Vigilance should be increased. A guard of a company should be kept at each end of this bridge and trestle-work."

General Pemberton to General Franklin Gardner, Port Hudson, Louisiana:

"JACKSON, April 27, 1863.

"From information derived from a prisoner, it is believed that it is the design of this party of the enemy to join Banks. You must make every effort to intercept them. They were to-day, 12 o'clock, at Hazlehurst on New Orleans & Jackson Railroad."

General Pemberton to General Stevenson, Vicksburg, Mississippi:

"JACKSON, April 27, 1863.

"The raid is reported approaching Hazlehurst west of Pearl River. All the disposable forces of Wirt Adams must be sent out to meet them. It seems to me probable the intention is to reach Big Black Bridge. Movements should be made to prevent it."

General Pemberton to General Bowen, Grand Gulf, Mississippi (two dispatches):

"JACKSON, MISS., April 28, 1863.

"It is probable enemy numbers 1,500; have no information of his movements subsequently to Hazlehurst by interruption of communication. Our cavalry must follow him up."

"Have reason to believe enemy are striking for Natchez or Baton Rouge. Send courier to your cavalry to try to get on their flank and rear. If Colonel W. Adams has not gone, instruct him to go on and take command of all the cavalry engaged in this expedition. From Osyka northward there are eleven companies of cavalry operating."

General Pemberton to Major M. R. Clark, commanding Conscript Camp, Brookhaven, Mississippi (two dispatches):

"JACKSON, April 28, 1863:

"The enemy may possibly pay you a visit. Their principal object will be to parole prisoners. It will be well in that event to send all the men you cannot arm to the country, if only a few miles."

"Send couriers to cavalry to move as rapidly as possible towards Grand Gulf, keeping out advance guards, so as not to encounter main force of enemy, harassing his rear and flank."



MILITARY VETERINARY HYGIENE.

BY OLAF SCHWARZKOPF, V. M. D., VETERINARIAN THIRD CAVALRY.

THE history of war, ancient, medieval and modern, is pregnant with facts which show the great losses of army animals from the ordinary causes of improper care, overwork, starvation and the introduction of devastating diseases, which have in many instances tied the hands of military commanders, and in not a few have compelled them to desist from further pursuit of a campaign without having gained the real object in view. When all branches of the military art are now studied with the object in view of preparedness for war, then the problem, how to keep army horses in the field alive, healthy and serviceable, is serious enough to warrant a special study by army officers, not only by those of the cavalry and artillery, but by all such as may be dependent upon horses for mounts or for transportation.

Few, indeed, will be those among us who can conscientiously affirm that such has been the case heretofore, or that it is now. It is true that in our army, as in all civilized armies, the subject of the hygienic care of horses is treated in a rudimental manner under the heading of "hippology." But this Greek name implies everything and anything pertaining to the horse, but really nothing in particular about the army horse. This may be one reason why the average books on hippology still contain no more than the old conventional teachings on the conformation of the horse, which is seldom more than skin deep; a few hygienic rules of his care as regards grooming, feeding, watering; some mystic dictates on the recognition of the age by the teeth, a knowledge which is greatly overestimated in its real value by laymen; some rules and pointers on stable management, on biting, saddling, shoeing, and finally some more or less empirical treatise

on the injuries and diseases of the horse. If we follow the historic origin of these "books on the horse" in a technical library, we discover with wonder that they all have remained nearly the same in conception and extent during the last three hundred years and more. One need only to scan the pages of the "*véritable parfait maréchal*" by Solleysel (1617-1680), the similar work of Peuvinel (1570-1620), with its fifty-eight luxurious cuppers on the French medieval art of riding, down to the works of the Italian riding-masters, Pignatelli (1550) and Grisone (1518), to find that we have copied much, perhaps unknowingly, from these medieval writers. As one example, it may be interesting to note that the work of Grisone contains that distorted picture of a horse which points out his blemishes and diseases, and which, after 350 years of wandering through "horse-books," has found a place of preservation in our Cavalry Drill Regulations, on page 453.

While I do not intend to assert that our chapters and books on hippology do not contain much that is needful to know by our newcomers into the army, may they be young officers or recruits, yet such books cannot impart more than that "little knowledge which is proverbially dangerous." It is more so dangerous, because the innate love of the horse makes everybody believe that he knows all about a horse and is a born rider. But our publications on the horse demonstrate that we have made little effort to throw off the shackles of empirical knowledge, whereas we should have adapted the results of modern scientific research as embodied in our present day theories of veterinary hygiene.

Some sternly practical horseman may now maintain that officers do not rely much upon the theories of hippology, but that they gain the knowledge of the horse and his care by daily practical experience in the stable, camp and on the march. There is some truth in this, but is it the whole truth? It shall be admitted that many of our older cavalry captains of years gone by, who really received their lessons on the military care of horses in the actual warfare with the nomadic Indian tribes, were such practical horsemen. They were no hair-splitters on theories, but common sense, hardy

horsemen, who had learned how to help themselves in emergencies, even if their way was not always scientific. They could do things with their own hands if need be, and do it well. But such practical things are little understood or appreciated by the younger officers of our new army; not all of them have the liking for horses and riding that cavalymen should have, and somehow the feeling must have crept into our arm that the little routine matters of horse management are somewhat beneath the dignity of an officer. The writer does not feel qualified to inquire into the cause of this fact, but for the sake of fairness it may be suggested that our late Philippine campaign, with its hurry and rush, and with its manifold demands for military and civil administration, has compelled our young officers to apply themselves more particularly to other matters of a purely military nature, leaving the ordinary care of the horse to others under them. This shifting of supervision, inaugurated under dire necessity, had its mark stamped upon many a troop in the Philippines, from which the service naturally suffered.

Thus it is evident that the mounted officers of our re-organized army need not only a return to a practical application of the details of military care of horses, but that it is also time to abandon mediocrity and aim at a higher standard of theoretical education in the hygiene of the army horse.

WHAT MEANS HYGIENE?

Dispensing with the ordinary definitions of the term hygiene and the conception of health, let us at once inquire into the fundamental reasons by which the health of horses may be preserved, and how it is endangered. Under ordinary circumstances a horse sustains itself in health if the proper necessities for the existence of his life are provided for him, particularly pure air, good food, sufficient rest and sufficient work. If one or a few of these necessities are changed or absent, then the living body at once exercises a strong tendency to accommodate itself to these changes by the inherent regulatory functions of its various organs, a power commonly called "nature." But these regulatory

functions are not always powerful enough to preserve the balance of health within the system, nor are they always strong enough to overcome the ordinary influences which may endanger it from outside, such as impure air, improper food, too little rest or too much work, and then the animal may succumb to some form of illness or another from its own lack of vigor. Still there are other, more remote causes of disease which are of an entirely different origin, such as poisons, parasites, and the manifold germs which produce disease. The theory of this danger of "bugs," humorously so termed by laymen, may not be as dark as sometimes painted by ultra-scientists, but it is greater than is generally admitted by those who are not familiar with its scientific aspect. We need only to remind our military friends of the ravages which the little "bacillus of glanders" produced among our cavalry horses in the Philippines, as also of the "parasite of surra" which could be seen so extremely alert and busy in the blood of horses infected with them. But even these and many more germs, parasites and poisons are not always positively destructive in their effects if only the animal is in a perfect, normal health. We know, for instance, that the germ of glanders is not always infectious to a healthy horse, but that its propagation and harmful influence is greatly dependent upon a weak and emaciated condition of the horse, such as is favored by insufficient food, hard work and little rest. Thus, in the army we must guard against the introduction of this germ in war when such conditions may prevail.

These few brief scientific facts, chosen to illustrate our subject, should make it clear that we must not only understand how to provide for a few ordinary necessities of the life of horses, such as proper food, general care, sufficient shelter, etc., if we want to assist his nature in preserving his health, but we must also know how to guard him against the manifold causes of disease. In this broad sense hygiene becomes applied etiology, which means that those of us who have charge of public animals should not merely know and practice a few rules of health, but that we should also sufficiently

comprehend the relationship between cause and effect in the diseases of horses and their intelligent prevention.

MILITARY VETERINARY HYGIENE IN THE GARRISON.

Although different animals, such as camels and elephants, have been used at certain periods and under certain conditions of war, the utility of the horse has steadily grown larger for many hundred years past, and to-day the horse remains practically the only animal used in warfare. The useful mule of our army has its own virtues and vices apart from the horse, but he is so near the horse in constitution, needs and ailments, that our consideration narrows down to the hygiene of the horse. This subject is wide enough as ordinarily considered, but it certainly becomes a special study if considered from the military standpoint. Indeed, if the hygienic care of the army horse consisted merely of the teaching of his care in time of peace and in the garrison stable, then the general rules promulgated for well-kept horses in civil life might be sufficient for the care of the army horse. This can be seen if we observe reasonable care and sanitary protection given to army horses in time of peace, which has had great and beneficial results. Anyone acquainted with the hygienic conditions prevailing in the army stables of the foremost European armies must acknowledge this fact if compared with times not so far distant. Only a hundred years ago glanders decimated the mounts of whole armies of Europe during peace, a fact which is almost inconceivable for us to-day. In our own army, too, we have generally fared well in preserving the health of our horses during peace. Much of this good result is due to a sensible, natural hardening of our horses by herding and grazing them whenever possible, and by a general care at the garrison which is laudably free from artificial pampering and that exaggerated race-course-care which has partially invaded some European army stables. But we must not forget that conditions have been very favorable for our own good results. The horses used in the short Indian campaigns were mostly born and reared in the same

climate and on the very soil on which they were used, so that they were practically at home even in the field. Moreover, the isolated situation of our army posts has kept our army horses free from contact with contagious diseases, which is an ordinary cause of epizootic diseases among horses of European armies garrisoned within cities. Finally, the employment of our horses in peace has not yet approached the intense use of army horses in drills and maneuvers which tax so greatly the health and strength of horses in the foremost foreign armies. But withal, we have learned many valuable lessons in the care of our horses, and while we have to learn many more, we need entertain little fear of ruinous diseases among our horses during time of peace.

MILITARY VETERINARY HYGIENE IN THE FIELD.

Granting that all civilized armies have learned how to take proper hygienic care of their horses *in time of peace*, have they also learned how to do so *in time of war*? Let us see. The very moment our horse accompanies the army into the field, he is taken out of all ordinary hygienic conditions of life which are the rule in time of peace. He encounters a variety of strange influences, such as changes of climate, irregularities of care, shortage of food, absence of protection; he has to face peculiar injuries and diseases which are practically unknown in time of peace; in short, it is the unexpected and exceptional in everything that he has to meet constantly. If these changed conditions of life arise for our horses, we have so far been unable to intelligently meet them. It is an indisputable fact that veterinary hygiene in the field is as yet an imperfect science, surely an unapplied science. One need only to study the military writers on the South African War and on our own campaign in the Philippine Islands, to be peculiarly impressed by their endeavors to explain the wasteful destruction of horses in recent wars as something unavoidable, something that goes with modern warfare and for which there is no apparent remedy. This may be so from the purely military standpoint, which considers only the results obtained and

counts the loss of horses merely an incident. But those of us who had to deal directly with the details of the causes of such losses, know only too well wherein the fault of it all lies, and we were never in doubt that the principles of military veterinary hygiene are sufficiently elastic in their scientific aspect to meet the exigencies of warfare in much the same manner as they have met the simpler and better known demands of peace.

That this is not a mere hypothesis but a practical possibility can be proven by simple facts. Many of us have been with troops on the march, in the camps and on expeditions where we had the opportunity to observe the different use and care of horses by different commanders. One troop commander may bring his horses back healthy, in fair condition and good spirits, ready to partake of the good things that come with well-earned rest; another troop commander who has done less work may return with his horses worn out in body, and broken in spirit, unable to recuperate in a reasonable time; and there have been seen detachments of mounted infantry that had done no other work than to occupy some military post and keep open connection with neighboring posts, and yet their horses were in a pitiable condition. Such observation points plainly to a common source for good or evil, which can be none other than the ability of the officer in command of such small organizations to lift himself above the mere military aspect of his mission and to attend equally well to the minor details of husbanding the strength of his horses, or at least to encourage and support by his authority those under him, whose duty it is to perform the work entailed thereby. What is attainable by a commander of a troop ought to be possible for commanders of larger organizations, and there are held out as example the lives and deeds of great cavalry leaders of different nations who knew how to save their horses by judicious care, while others ruined them by neglect or want of knowledge of the hygienic care of horses.

Perhaps some grim warrior may object to such views as sentimental, and maintain that sentiment has no place in an army, and that the life of a horse is not worth considering

when a great result is at stake. This assertion has become a military phrase. It is not denied by anybody that a horse's life has no such intrinsic value as the life of a soldier, as it represents only a money value to the government; but that is not the real question at issue. The main object of military veterinary hygiene simply is to save as many serviceable, well-trained horses as possible in order to have them on hand and ready for work when such a great result is really at stake. That results are often imagined as greater than they are, or at least estimated as greater beforehand than they prove to be afterwards, is one of the errors of military enthusiasts, who are blindfolding themselves in the pursuit of one object alone. In so doing they lose sight of other issues and their consequences, one of which is the husbanding of the strength of their horses. When these break down prematurely or are entirely lost by diseases, then comes the cry for new mounts. But new horses are seldom procurable in the field on short notice or in sufficient numbers, and when they finally arrive they prove to be raw, unbroken animals of inferior quality, because purchased in haste, unacclimated and emaciated from a long journey; in fact a hindrance rather than a help in any further movement. This was our experience in the Philippine campaign, and we read that it corresponds with the experiences made during the South African War.

Thus coming down to naked facts, it is not sentiment that aims at the preservation of horses in the field, but a prudent, intelligent foresight developed from adverse experience. The correctness of this contention is acknowledged by many calm and considerate cavalry leaders of different armies, but it would lead us too far to cite their good advices. They have learned that the old proverb, "An ounce of prevention is worth a pound of cure," is not an empty phrase, but that it constitutes an actual truth, by which the modern notion that war necessitates the waste of horses is proven a fallacy that can be successfully avoided by true knowledge and careful attention.

It is denied that the causes of the losses of horses in the field are many. It is impossible even to mention them all

in the infinity of combinations which actual field service presents. But it can never be difficult for one thoroughly instructed in veterinary hygiene to ascertain their cause and devise means for their further prevention. Yet, mistakes must not be made as to the real cause. One of the common errors is the accusation of shortage of food. This is a calamity. Still, a horse can subsist on comparatively little food for weeks, and even for months, and while he may become in poor condition from losing his stored up fat, yet he can remain healthy and in good spirits and in fair shape for work, if he is only otherwise treated reasonably. But by far the surest and most common cause of the "breakdown" of horses in the field is ruthless overwork, absence of sufficient rest, and a continued worry of the animals by that excited rushing and pushing forward which is supposed to underlie the gospel of offensive tactics. A horse can be ridden to death in less than a day by a man who fancies that riding means a perpetual struggle between man and beast, or who is ignorant of the limits of its endurance, or who is anxious to save himself from undue exertion, or who considers the horse merely an automaton furnished to him by a rich government. We are not unmindful of the fact that at times the horse is at fault and not the rider. There are excitable or dull brutes in the ranks, with whom neither patience nor kindness will avail, and we have often enough known other horses that are totally unfit for the military service by faulty conformation and weak constitution. For this the government is responsible by a faulty system of providing remounts. But nowhere is good horsemanship quicker shown than in the field, and fortunately we have always natural horsemen in the ranks who, by their good temper and love for the horses, bring them through a whole campaign alive, healthy and in good spirits, no matter what the hardships may have been for both riders and horses. It is only a pity that such natural horsemen are so few, even in the cavalry.

THE PURCHASE OF REMOUNTS BY CONTRACT.

It has been already indicated that, great as the responsibility of individual commanders of mounted troops is as regards prudent horse-management in war, they cannot always alone be held responsible for losses of horses from premature breakdown by field work or disease. We must look to our government to make proper provisions and allowances, and to the supply departments to properly supply them. One of the most difficult problems is the purchase of suitable mounts for our cavalry. This problem is an old one in our army, but remains unsolved. It has been partially solved by but few European armies, and this only after adverse experience in many wars, dating back hundreds of years. The systems of remounting established by these armies, frequently incorrectly reported, are those of direct or indirect breeding of their army horses. Russia is the only country which has gone so far as to directly breed her own cavalry horses, at least in part. Germany, Austria-Hungary, France and some other countries, have chosen to assist their natural breeding districts by supplying them with suitable stallions bred in the government studs. This latter system is beyond dispute the most noteworthy. It does away with the fruitless discussion of what constitutes a suitable cavalry horse in theory, on which no two officers can agree. It fixes a certain type as most suitable for military purposes, because the sire is bred on such lines of conformation, size and soundness as have proven most valuable in war, and the mares to be covered must conform to a certain standard of breeding and soundness. This system may appear as paternal to us, but it is nevertheless wise, as few breeders would properly mate the sire and mare if the choice were left to them. Thus the armies mentioned are enabled to procure annually a sufficient number of horses, whether horses are scarce or plenty, and they receive a uniform class of horses which are sound by heredity. This latter point is of enormous advantage. In the purchase of remounts from a contractor or dealer, as is the case in our army and in the English army, no such certainty of inherited soundness is possible. We can find a horse sound as he

stands; but how soon he may become unsound by ordinary military use no one can foretell. True, there are certain positions of the leg and formations of joints which probably indicate an inherited predisposition to contain forms of unsoundness, but how few of our inspectors and veterinarians are able to recognize and properly judge such infirmities, which, after all, are based more on guesswork than on real and accurate knowledge. From this reason we have in our army an unproportionally high percentage of horses for periodical condemnation, which few armies and few countries other than ours could afford to pay for. But with all this expenditure of money we are entirely unable to procure even a middle class of horses which are uniform and serviceable, because our remounts come from different sections of the country and of different stock. They generally range all the way from fair horses to the worst scrubs, entirely dissimilar among each other in conformation, size, weight and intelligence—a sorry lot to look at and a worse lot to ride on.

Much has been written on this subject in our military journals for years past, and some excellent suggestions have been made from time to time to remedy these defects. But we have been told by our horse-breeders that any system of breeding our cavalry horses after European fashion will be looked upon by them as un-American, and that our country is well able to supply all horses we shall ever need in time of peace or war. As such opinion must have a certain weight with our government, it would be impolitic at present to dispute this point, and we shall have to look for the next best method of supplying our army with suitable remounts.

REMOUNT DEPOTS.

There is only one substitute which can be regarded as at all promising good results in remounting our cavalry, and that is the establishment of remount depots. It has been announced that Fort Riley, Kansas, has been selected for the location of such a depot, because this post is a natural center of our army, it lies near some of the best breeding districts of saddle horses in the country, and its large reservation se-

cures ample room for the erection of the necessary buildings. As we are new in such an enterprise, a timely warning may be permitted not to copy too close the old plans of the European establishments, to cram together a few large stables in a comparatively small area. This is against all principles of veterinary hygiene, and has had its disastrous results in fostering the peculiar diseases of remounts which are bound to develop among young horses. There should be plenty of room everywhere, with a number of smaller stables and several isolated veterinary hospitals, with running yards, paddocks, and pastures for grazing. Only with all these points skillfully observed will we succeed to develop colts into well-grown cavalry horses, for that is the real object of a remount depot in peace. Of course, we may purchase four-year old colts at the start, as we have done so frequently, and allow them to fully mature instead of prematurely ruining them in the ranks. But we shall soon learn, as most European armies have learned, that we are obliged to purchase younger animals, because a fairly matured four-year old colt is eagerly bought up by dealers everywhere.

It will also soon be found that one remount depot is not sufficient to supply the needs of our largely scattered army, and at least two more will have to be established, one in the East and one in the far West. With these remount depots in successful operation, under skillful management, we shall have taken quite a step toward better mounting our cavalry. Yet, if the history of the remount depots of some European armies may teach us anything, we shall then be slowly drifting towards breeding our own stud horses or even our own cavalry horses, for which a bountiful nature has given us better opportunities and greater facilities than any European army possesses, except perhaps Russia. The indicated result will be sure to come as soon as we have learned in our army more about the breeding and rearing of cavalry horses, a knowledge which experience in the remount depots will gradually teach us. Moreover, the selection and collection of horses by the remount depots will not be found to be above criticism by the regiments, because there will never be a time when our private horse breeders will fully under-

stand the particular purpose of a cavalry horse, and only by breeding for this purpose can such a horse be produced and can such a breed be established in this country.

THE QUARTERMASTER'S DEPARTMENT AND THE ARMY HORSE.

There is no department on whose efficiency and willingness depends so much the welfare of our army horses in peace or war as the Quartermaster's Department, because it furnishes in our army not only the horses but everything that pertains to their well being. In peace this department works smoothly as regards the supplies needed and allowed for horses, but in war it is not always successful in accomplishing its purpose. In the earlier Philippine campaign, just as in the South African War, our horses had no oats or hay, the food best suited for their health and labor, and they had to subsist on rice and native grass, a strange food and not always a proper one. For quite a time there were also no horseshoes, and when these arrived no shoe nails were sent with them, neither did we have at first veterinary medicines and dressings. All these are supplies that should go with the horses when they are shipped, and their issue should be kept up without interruption.

It is one of the oldest experiences of armies schooled in warfare, that the supplying of food for men and horses in the field is the most difficult task to perform. There are many instances recorded in military history where this has been evidently impossible, and the results have always been disastrous in great loss of men and horses. It is certain that we have made no great progress in the transportation in the field, and our most modern appliances, such as the automobile, give little hope of a reliable means of improvement. These machines may be of certain use in maneuvers and even in war in the old, settled countries of England, France and Germany, which possess a network of excellent country roads, but for warfare in semi-civilized or unsettled countries where good roads and bridges have not been built, they must be regarded as hopeless playthings. It is worth remembering that the commanders of smaller mounted organi-

zations in the Philippine campaign soon learned again the value of the pack-mule, thus returning to the most ancient system of using "beasts of burden" as practiced by the armies of Greece and Rome, by the Crusaders, by Wallenstein in the Thirty Years' War, and by Frederick the Great in the Seven Year's War in Silesia, not to forget our own constant use of the pack-mule in the Indian wars, especially in mountainous districts. The great drawback of the cumbersome transportation by heavy wagon trains lies in the fear of everybody that they may get stuck in a bad road, and may not arrive in camp until after dark, if at all. All of us know that these occurrences are common. This feeling of unreliability is the cause of the overpacking of horses with articles that are not intended to be on the saddle, and which help to cause not only sore backs but a speedy break-down of the animals. It was often a memorable sight in our Philippine marches to see the troops start out of camp with the saddle-bags extended to the breaking point with things that should not be seen, overruling the carefully laid down regulations about the equal distribution of weight of the cavalry saddle as it is packed in place. And yet with all these "unavoidable" weights some troop commanders would wonder how their horses acquired sore backs. True, this overpacking of horses in the field is the only means at present to keep mounted troops mobile and independent, but it is certainly done at the expense of horse flesh, horse spirit and horse life.

Thus, with all the display of modern equipments, we have as yet no adequate improvement in the simple transportation of the necessities of the soldier in the field. It is for the Quartermaster's Department to devise some light, movable and reliable contrivance for future campaigns, that will unburden our overpacked horses and keep our mounted troops serviceable for a longer period. Until such has been invented the ancient pack-mule must remain the only reliable camp follower, the only source of comfort when he promptly comes into camp with that joyful bray, the equal of which will never be heard by any soulless machine contrived by mankind.

THE PREVENTION AND SUPPRESSION OF CONTAGIOUS DISEASES.

While in time of peace the necessity for the prevention against the introduction of contagious diseases of horses is not a frequent occurrence from the isolated location of our garrisons, the danger of infection is ever present during a mobilization and as soon as horses are transported by rail or over sea, resting perhaps here and there in corrals for short intervals. Intelligent foresight and diligent watch should then be employed, and prompt measures for the suppression of contagious diseases must be taken at once. That in our mobilization during the Spanish War, and later in rushing horses to the Philippine Islands, we have taken such intelligent precaution, must be denied. The camp at Chickamauga soon became hot-beds of glanders. At first the old, ever repeated doubt arose whether the disease was really glanders or not, a doubt incurring the loss of valuable time for prompt action. When this doubt was overcome, then the carnage by the bullet and the butcher-knife began, whereas under the light of modern veterinary hygiene most of the horses, at least many of them, could have been saved by the intelligent use of mallein, by prompt and correct isolation, and by a thorough disinfection of the infected corrals and picket lines. Nor was any lessons learned from these occurrences. True, attempts were made at San Francisco to test the horses to be shipped to the Islands, with mallein, but this was done in a crude manner by crude men, and again many horses were killed on mere suspicion.

Whether glanders was indigenous in the Philippines or whether it was first introduced by our troops, has been a point long disputed but never definitely ascertained, but there has been a tendency to blame our officers of mounted commands for its introduction. But even if it was so introduced, it was the fault of our system, or rather entire lack of any system, to prevent such occurrence, and military officers who happened to be responsible for horses, should not have been accused for its failure to work. The only persons responsible for such matters can but be the army veterinarians, provided that they are educated professional men, and as

such placed in a position where they can give intelligent counsel to the proper military authorities. This is the only safe and correct standpoint, because it is impossible that any military officer, however experienced he may be in the care of horses in garrison or in the field, can have a correct knowledge of the specific pathological lessons of this disease which would enable him to make a positive diagnosis. This knowledge can be acquired only in the post-mortem room and in the histological and bacteriological laboratories. Of course I have met a few officers who thought that they "knew a case of glanders when they see it," but I have never yet seen one of them step up to a diseased horse to carefully examine him in order to verify his suspicion. Neither can any reliable veterinarian make a diagnosis at such a respectful distance, but he must open up the nostrils of the horse which are often glued together by a sticky and fetid discharge, use a reflector if necessary, and take the risk of having a few millions of bacilli sneezed into his eyes or nose. How often has the writer earnestly tried to convince members of boards of survey that a horse was really diseased with glanders by opening for them the nostrils of a horse, but few officers would venture near enough to see for themselves. While such abhorrence of a deadly disease is perfectly natural in laymen, it shows that after all, these officers had to write their signature on the best of their belief, relying on the knowledge and integrity of the veterinarian and on his opinion. As this is very much the same with some other diseases of horses it is clear that in such crucial tests the veterinarian ought to be the responsible expert and not the military expert the responsible veterinarian.

On the whole it must be confessed with sorrow that our dealing with glanders in the Philippines was most crude, bordering on many occasions on the lowest empiricism, unworthy of an educated army. The main cause of this state of affairs was the absence of qualified army veterinarians in the early campaigns, and the hiring by the Quartermaster's Department of impostors who masqueraded under the title of contract veterinarians, but many of whom proved to be missionaries, homœopathic physicians, wheelrights, team-

sters, and "men born and raised on the stock ranch." Such were the experts given to officers responsible for horses and mules to control and stamp out an animal scourge. The result was that the disease spread with rapidity and soon assumed alarming proportions throughout the Islands. Then came the stop of the disease by order, informing us that "as a rule tropical glanders is not dangerous like its prototype in the United States, and animals affected with it will usually recover with treatment. The wholesale destruction of public animals should cease." No doubt there were instances of ruthless and ignorant killing of horses by the advice of the men enumerated above, but there is also no doubt that the true, old-fashioned glanders had eaten itself deeply into our horses and mules, perhaps more so in some districts than in others. So the above well-meaning optimistic opinion came to the afflicted as a thunderbolt, because it was so much at variance with the true condition, and could not have emanated from a thoroughly informed expert. By this time the disease was well under control in some districts, and its ultimate suppression only a question of time. This had been accomplished by the intelligent work of a few educated army veterinarians, backed by their commanding officers who had seen for themselves the ravages of the disease. But glanders had been declared under ban and it ceased at once to be heard from. The officers responsible for horses were further willing to report even the suspicion of glanders among their horses.

But heaven came to the rescue of the oppressed. All at a sudden "surra" was discovered in Manila. The news came from the "Army Pathological Laboratory," an acknowledged scientific body. This new disease had a mystic but clear name; it was not spread by the carelessness of officers and men as was the case with glanders, but "flies" carried the infection, and who can stop flies. It was a deadly disease, but as no successful treatment was known there was excuse for the dying of horses. The symptoms "resembled" those of glanders, so that "the casual observer" could make a mistaken diagnosis of glanders instead of surra.

Of course, no army surgeon will diagnose small-pox or bubonic plague by "casual observations." but the surgeons of the Army Pathological Laboratory evidently believed that a veterinarian in making a diagnosis of glanders is a mere "casual observer." So again the advise given to our military authorities was that of medical experts and not of veterinary experts. They were correct in their detection of the "parasite" of surra, but they were wrong in bringing it into connection with glanders, which is a totally different disease. But the new disease fitted the occasion admirably, because it was officially sanctioned, and supposed outbreaks of "surra" were forthwith reported from different garrisons where glanders had been rampant. Bound for God's land, the writer was thrown back for long, weary three months investigating supposed outbreaks of surra, and to stem the tide of this new disease in the minds of its converts would have killed a man with seven lives

What should we learn from these experiences? Firstly, that in dealing with deadly contagious diseases of horses in the army, our military authorities should not depend upon half-educated veterinarians, troop farmers and hired impostors, which is worse than relying on the redemption by a merciful fate, as done by the army commanders in medieval times. Secondly, that our general officers should be given the assistance of educated, experienced chief-veterinarians, whose duty it should be to investigate the outbreaks of such diseases and give correct and reliable information and advice. Thirdly, that instruction in veterinary hygiene be extended to all officers of the army, including those of the Quartermaster's Department and of the infantry, both of whom are so often responsible for horses and mules in the field, in order to secure their intelligent coöperation in the suppression of the contagious diseases of horses and mules and in the prevention of their unchecked spread.

The object of this article has been to paint with a few strokes of the pen some shortcomings, mistakes and oversights, which are apparent in our army, and to suggest their amelioration. The criticisms made were born of careful observation, unprejudiced thought and hearty good will.

There is no army in the wide world which is perfect, even if things look well nigh perfect on their surface, and ours has certainly its shortcomings on the subjects touched upon. It is hoped that our military commanders, high and low in rank, will come to acknowledge the value of a higher knowledge and better practice of veterinary hygiene in our army, for tactics and strategy alone cannot win battles and campaigns, but they must go hand in hand with a wise appreciation of the eternal laws of nature as demanded in the hygienic care of men and horses, both of which go to make up an army in the field.

TARGET PRACTICE IN ENGLAND.

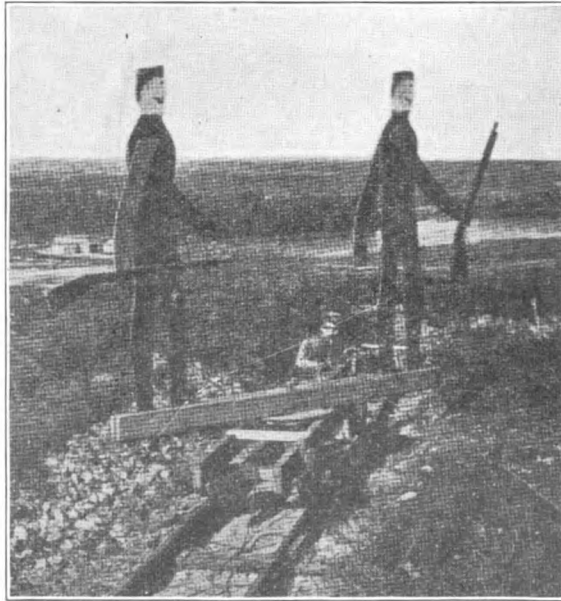
BY LIEUTENANT W. B. PERSHING, FOURTH CAVALRY.



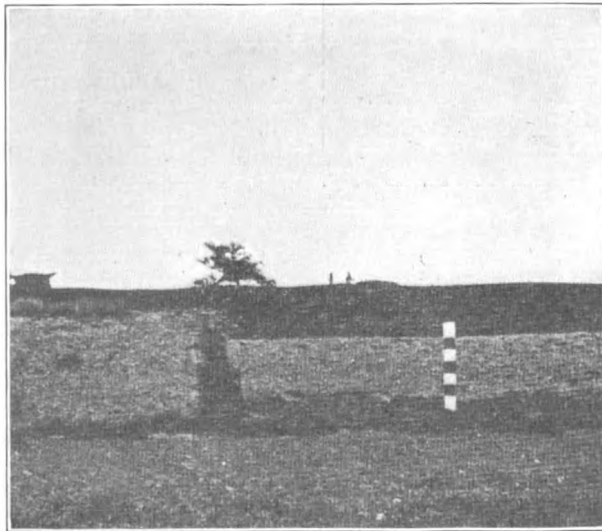
THE SIGNALER.

IN view of the recent changes in our firing regulations and the adoption of the new rifle with which our service is soon to be equipped, it is thought that a brief outline of the present system of target practice in England, to which subject great attention is there being given, may not be uninteresting.

The School of Musketry at Hythe, where both commissioned and noncommissioned officers are sent for instruction, has for its purpose the special musketry training of those so detailed and secures a uniform system of instruction throughout the service. With this end in view frequent inspections and visits are required to be made by the commanding general of the department to all garrisons under his command. In addition to this the commandant of the school at Hythe inspects all home troops once each year, and is constantly in touch with and maintains control over the methods employed in each department. This control is furthered by means of the reports required monthly from all garrisons showing the course of instruction to be followed during the ensuing month.



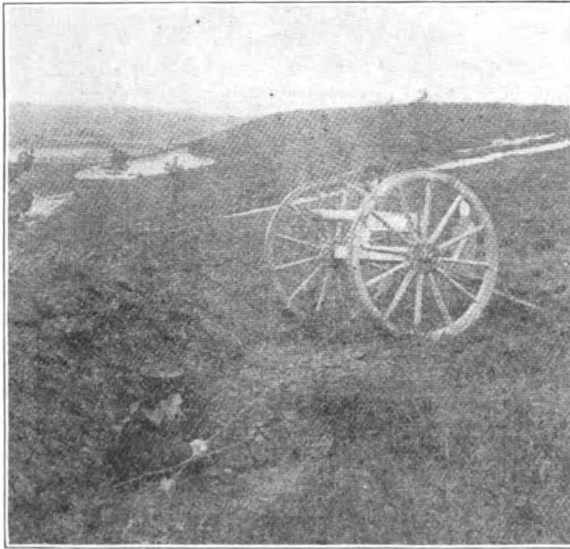
THE RUNNING MEN, SHOWING HOW THEY ARE WORKED FROM THE FIT.



THE SAME FIGURES ON THE CREST OF THE HILL SOME 400 YARDS AWAY.

For the fire efficiency of a company its captain and his lieutenants are responsible, but the noncommissioned officers receive their preliminary training as drill instructors from the adjutant, assisted by the noncommissioned officers, who hold certificates from Hythe, known as sergeant instructors.

Field firing is compulsory wherever the ground necessary for conducting it is available, and the men are divided into three classes for target practice. First, recruits; second, trained men; third, exercised men; each class having as a

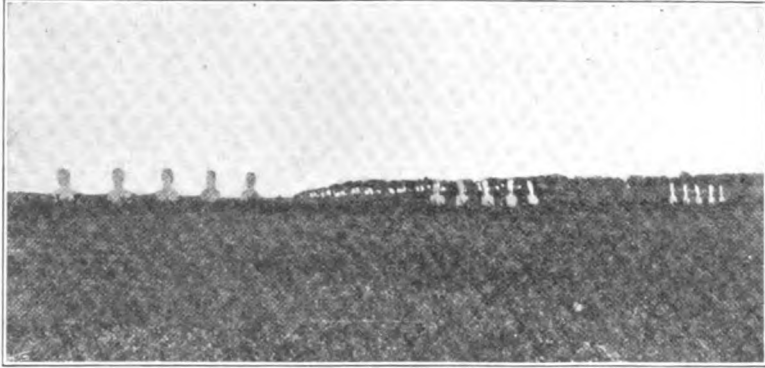


THE DUMMY MAXIM.

prerequisite to admittance to it a certain degree of proficiency in the preceding class. Rifle clubs among the men are given every encouragement, and great interest is always displayed in their matches, which are conducted under the supervision of a noncommissioned officer.

Recruits are given their preliminary instruction by the assistant adjutant and the course consists of four parts: First, the care and description of arms and ammunition; second, instruction in firing exercises; third, aiming drill; fourth, instruction in theoretical principles. This course is followed in turn by judging distance, miniature cartridge practice and

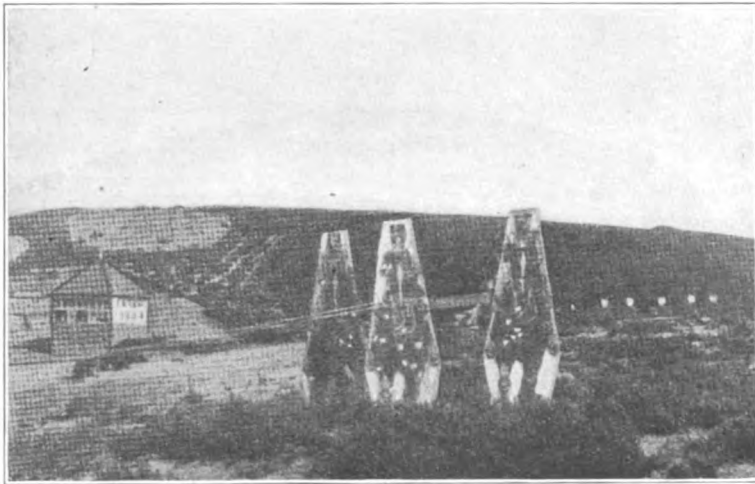
blank firing. On the attainment of a certain degree of proficiency in these subjects, the recruit proceeds to actual firing in the target practice course, recruit class. To this point the



HEADS AND SHOULDERS AMONG THE HEATHER.

English system is similar to our own in many respects, but the trained men are now taught the use of the stadiometer in range finding.

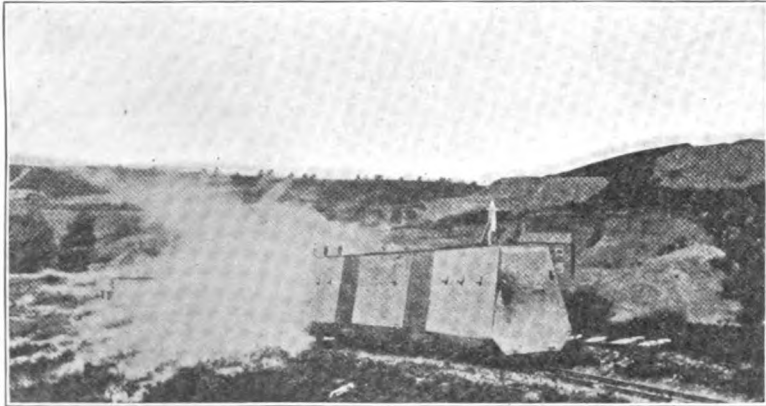
One feature of the system which seems to me particularly desirable is that of voluntary practice, for which purpose a



THE DUMMY CAVALRY.

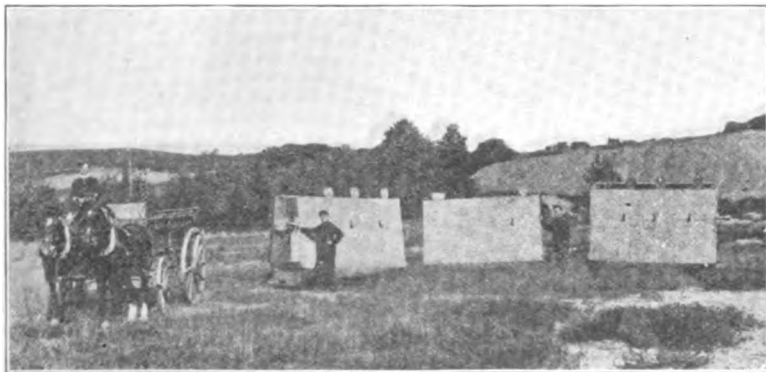
(Note the ropes which keep the figures straight.)

specific allowance of twenty rounds per man is authorized, and ammunition in excess of this allowance may be purchased for the same purpose by both officers and men. The



THE DUMMY ARMORED TRAIN SPITS FIRE.

practice itself is conducted similarly to our own, and the entries in the target record are made in ink at the firing point, while the noncommissioned officer in charge of the targets



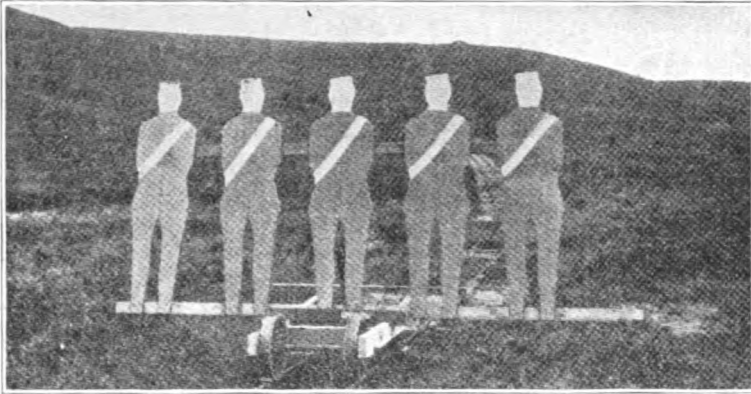
THE ARMORED TRAIN "GOING HOME."

(The white patches indicate the hits after a field day.)

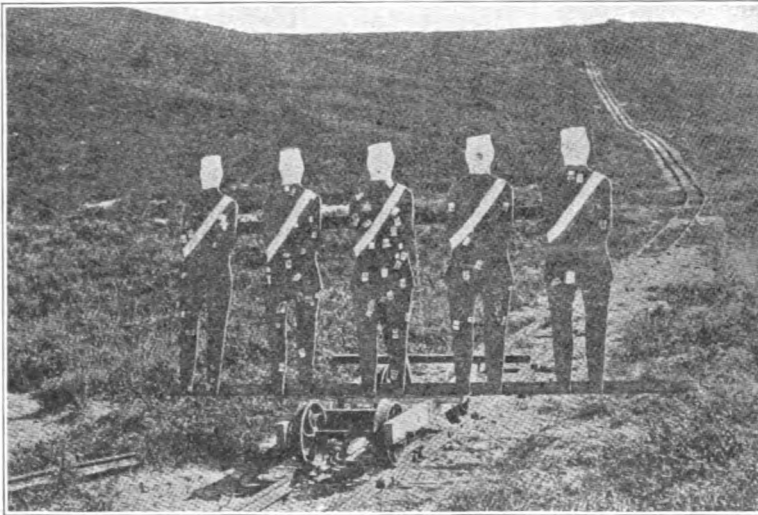
submits a signed memorandum of the hits on each target at the end of the day's practice.

The use of the sight fixed at 500 yards, which is ordered to be used against infantry and cavalry when fully exposed,

and where there is no opportunity for judging distance, seems objectionable, as it necessitates, as laid down in general instructions, aiming at the feet of the enemy at first, and then,

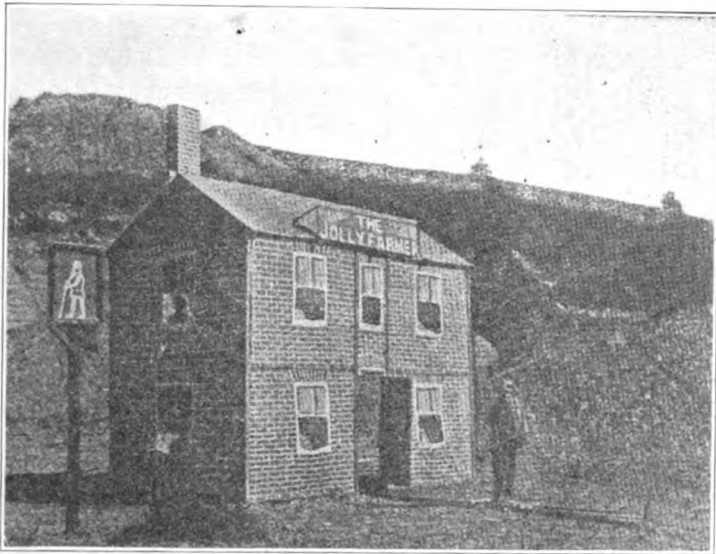


THE DUMMY WRECKING PARTY.

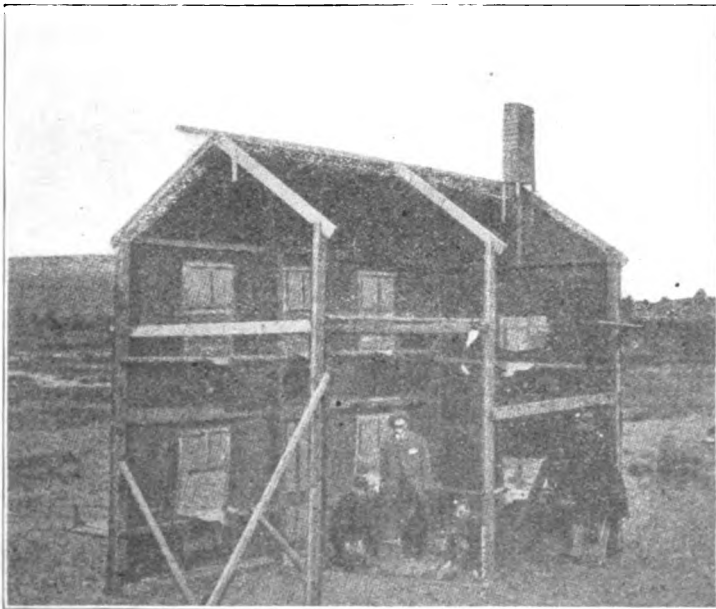


AFTER THE ATTACK.

as the distance decreases, changing the point of aim to below the ground line of the approaching objective. This would seem to entirely vitiate much of the careful preliminary in-



THE BOER INN



THE BOER INN — BEHIND THE SCENES.

struction at just the time when it should be of the greatest value.

Fire as used in the English service is classified as follows :



THE LANDLORD.

Slow fire, the usual rate employed, about five shots per minute; rapid fire, as rapid as is consistent with deliberate aim and single loading; magazine fire, ten to fifteen shots per minute. Miniature ranges, constructed with a total length of thirty yards and with the targets reduced proportionately, are in common use, but this practice is not made a matter of official record. Safety ranges, in which by means of embrasures, screens, and prepared surfaces of ground, erratic shots are controlled, are also

used where the extent of ground necessary for open ranges cannot be obtained. Both silhouette and bull's eye targets are in use in different portions of the course.

Among the subdivisions under which the practice is conducted are: Individual practice, rapid individual or timed fire, collective practice or field firing, deliberate volleys and rapid or timed volleys, which latter

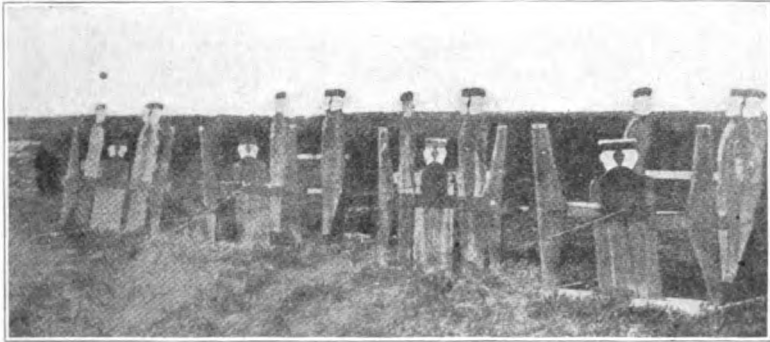


THE PIT, WITH MEN WHO WORK THE INN-KEEPER.

have for their object the development of the efficiency of the unit and its fire control. Independent firing, running practice,

long range volleys, and attack practice are other subdivisions. In the latter the kneeling position is prescribed for all distances nearer the objective than 600 yards, and the prone position expressly prohibited within the same limits, which is contrary to our ideas on the subject.

Field firing is held once a year under the direction of the commanding general of the department, assisted by his musketry staff officers, and is carefully conducted in the various arms according to the principles laid down for the attack. The distribution of ammunition is carried out as if in active service. No comparison in the efficiency of troops stationed



THE DUMMY BATTERY.

at different points is attempted, but each command is judged by its discipline and the general manner in which the exercise is carried out.

It is thought best to quote an account of a day's target practice at Aldershot in order to show how closely the targets used in England may be made to simulate an actual enemy. Captain Cassett, of the Thirteenth Cavalry, military attache at London, relates his experience as follows :

“The ground at Aldershot for this purpose, enables one battalion to advance to the attack with as near an approach to the conditions of actual warfare as I have seen. The battalion advances in column of route, when fire is suddenly opened on it from a single gun, posted about 800 yards to the left front. Deployment is at once begun, and the gun is silenced. On the firing line reaching the crest of a long hill

perpendicular to the front, the first position of the enemy is seen about 900 yards distant, and the advance is subjected to the fire of artillery by a battery about 2,500 yards away. The enemy can hardly be distinguished, as their skirmishers show only their heads and shoulders, and these only occasionally. As the advance continues the enemy is supposed to have retired to a second position about 800 yards away, with a deep ravine in its front, through which runs a main railway line. The enemy's object is to destroy this line before the advance can occupy it, and with this object in view, an armored train is sent down to cover a party of men who



THE SWITCH.

come running down the hill to blow up the tracks, which they are supposed to succeed in doing. The advance continues beyond the railway and up the hill, when the enemy is found to have taken his last position near the guns aforementioned. The battalion thus strikes three positions, covering about 2,500 yards. The targets are merely dummy figures of the simplest construction, and look as if they had been made by some post carpenter. They are all worked by men in pits by means of ropes and springs, with the exception of the armored train and wrecking party. An extensive system of telephones connects all the pits. A peculiar arrangement is that the advance is the whole time subjected to shrapnel fire, which is obtained by means of the explosion of small harmless bombs, suspended from wires above the men's heads or laid on the ground in front. This and the firing of the dummy guns by the same means are the only electrical features of the system. I must confess myself to having been startled when one of the imitation shrapnel ex-

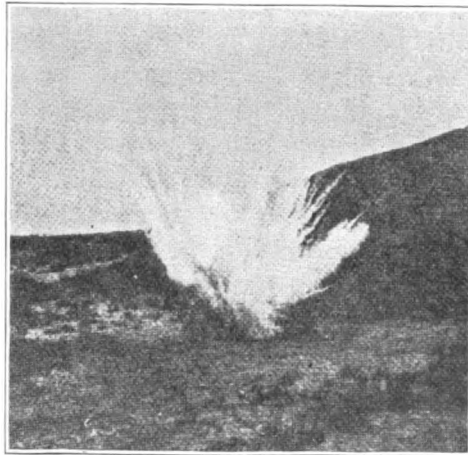
ploded without any warning at my horse's feet. The only thing in the system which could not be made at any post is the ingenious spring by which the fixed targets are made to assume their upright position after being pulled down. I can heartily recommend the adoption of a similar system at some of our larger posts.

"In conclusion, it must be stated that over all the ground are covered pits for the use of umpires, who, by means of mirrors, can watch the advance in all its movements. The only drawback to the practical utility of this range is that the government will allow only twenty rounds per man to be used in this practice."

A rather elaborate system of awards and prizes is laid down. These are under the control of commanding officers subject to the approval of department commanders, and have a great stimulating effect on the effort made by individuals to excel.

Many of the regulations governing this system have been but recently adopted, and every possible effort, it would seem, is now being made to remedy the not altogether good marksmanship (if one accepts without question the statements of some of the higher officials of the Boer army) displayed in South Africa.

NOTE.—The illustrations accompanying this paper appeared originally in *The Strand Magazine*, and are copied by permission.



THE EXPLOSION OF A GROUND MINE.

CAVALRY SADDLES AND PACKS.

BY MAJOR LOYD S. McCORMICK, SEVENTH CAVALRY.

ALL officers present know that cavalry saddles must necessarily be of a distinct type—almost totally different from that of saddles used in civil life. One pronounced exception will be noticed later. The ideal cavalry saddle would be one to give the greatest comfort to the horse in carrying the unavoidably great weight, the greatest comfort to the rider—at the same time lending itself to his many duties—and be of sufficient strength and durability to warrant the cost price and prevent the necessity for frequent renewal. Appearance in a cavalry saddle is a comparatively unimportant factor, and is ignored in this paper.

One of the features of this ideal saddle would be sufficient bearing surface, so shaped as to properly distribute the imposed weight of saddle, pack and rider over those portions of the horse's back which nature has prepared for carrying loads. This bearing surface is the entire under surface of the tree, and on its good or bad shape will depend, in a great measure, the verdict, for no matter how satisfactory the other parts may be, the bearing surface—or foundation—must be good in order to have proper results.

As the backs of horses vary so much, no positive rule can be laid down to govern in this matter. The best that can be done is to profit from experience, and when that teacher discloses a fault or discovers an improvement, to discard the former and adopt the latter. The weight to be carried—that is, of the saddle, equipments, and rider—governs to a great extent the size of the horse to be provided. In our service the average horse weighs more than a thousand pounds. This excludes from the cavalry very many horses,

weighing from 850 to 1000 pounds, which with lighter loads would no doubt render longer and more satisfactory service, since among horses of this class is to be found more frequently what is termed substance; and that quality is generally accompanied by the action so desirable in a saddle horse.

However, it is questionable whether any perceptible reduction can well be made in the weight our cavalry horses must carry—except in isolated cases of emergency—and as there is only one kind of cavalry with us, it seems a settled fact that we must retain the rather large horse.

The saddle used in our service—the McClellan—is the result of experience during the Civil War, and its bearing surface was determined upon after plaster casts of the backs of a large number of horses had been made. A detailed description of this saddle will not be taken up here, as most if not all of you are fully acquainted with it; and such a description is always within your reach. It is carefully made of the best materials, and is accurate in all dimensions; and is recorded in your text book as comparing most favorably with the saddles in use by the more prominent military nations as regards strength, durability, packing capacity, and comfort for man and horse; and as having been in use for forty years with most satisfactory results after the severest tests.

The fact, though, that our cavalry saddle has remained virtually the same for forty years is not wholly convincing that during that time a saddle with a more satisfactory bearing surface has not been constructed. I think it more than probable that if the same board of officers that made the plaster casts, from which the bearing surface of the McClellan saddle was determined upon back in the '60's, should make casts of the same number of average backs now, the bearing surface determined upon would be perceptibly different.

During the last forty years a great many breeds of horses have been imported—breeds not at all suitable for saddle purposes—and as the demand for saddle horses has decreased generally, the demand for draft horses has increased,

and consequently the farmer has turned his attention to Clyde, Percheron, Norman and other heavy, coarse animals. This mixture has certainly had its effect on the conformation of the average horse. An examination of the horses of any troop that has seen even a fair amount of field service will show very few, if any, without great blotches of white hair—the result of saddle sores—indicating beyond doubt that at one time or another nearly every horse in the troop had to be laid off from service and treated during a more or less prolonged tour on “sick report.” This is not so serious a matter in garrison, where horses of absent men can be used to replace those disabled, as it is in the field, where the chances are that the sore back must continue to carry its usual load until the horse—possibly from pain and discomfort as much as from traveling—gives out, and has to be shot or abandoned.

Of all the things that were in use forty years ago there are few of them in use now, made on those same lines; and I think that on general principles, if for no other reason, it is high time to have a fair trial of some other saddle that has a different bearing surface, and one with the best tested modifications and attachments.

During the twenty-seven years of my service I think there has been only one other kind of saddle given a trial. This was in the '80's, when I think two troops (one of the Seventh and one of another regiment) were issued the Whitman saddle. That saddle, as then made, was a dismal failure for enlisted men, as the pommel arch was so weak that few were unbroken after a short test in the field with packs. The arches have been strengthened since that test, and I believe they would now stand a severer trial without breaking.

The seat naturally adopted when riding a Whitman saddle I consider the best for military purposes, as the rider cannot, without a tiresome effort, take the “fork” or “tongs across a wall” position. Consequently the rider is closer to the horse and there is less swaying motion. Motion of this kind is very tiresome to the horse, as he has to constantly counteract it by so locating his feet as to retain his equilibrium. This causes his gait to be unnatural and brings un-

due strain on his muscles. The McClellan saddle favors the "fork" or "tongs across a wall" seat. One reason for this is the location of the stirrup loop, which is too far to the rear and is almost under the rider's crotch. This induces, for the sake of comfort, the straight leg, which is characteristic of the two faulty styles of seat mentioned above. The illustration on page 223 of the text shows the rider's feet at least ten inches in front of a perpendicular dropped from the stirrup loop. To retain this position he must constantly, by muscular exertion, keep the stirrup pushed that much away from the most natural and most comfortable position—that is, in a perpendicular dropped from the point of support. This muscular exertion is bound to have its effect; after riding one or two hours, advantage is taken of the first halt to lengthen the stirrups; the leg straightens, and the "tongs across a wall" follows; or the feet fall to the rear under the point of support, and we have the "fork" seat, in either of which positions the swaying motion begins.

I think another reason for these faulty seats is the steepness of the McClellan saddle from the center of the seat to the cantle. It requires considerable exertion to sit braced against this surface. The Whitman saddle has a more level seat and the rider sits more on his buttocks, the portion of his body intended by nature for supporting his weight. The stirrup loops are located farther forward, and if that portion of the leg from the knee down hangs in a vertical position, which is acknowledged to be correct, the foot will be very nearly under the stirrup loop and no muscular exertion will be required to retain that relation. I think the Whitman saddle should be used until the rider is well established in his seat.

The saddles used in foreign armies seem to be more in keeping with what may be termed the Whitman seat than with that of the McClellan, and in this respect are better. It is difficult to accurately compare the weights of foreign saddles with that of the saddles used by the United States, with saddle bags and similar appliances removed. It is safe to say that our saddle is very much lighter. However, it is a

question whether most other features should be sacrificed in order to lighten a saddle.

I believe that if patient consideration could be secured so as to have a fair test of what is called the "Stock" saddle (which is the exception referred to in the second sentence of this paper) a great many officers would be convinced that it possesses some very desirable qualities not found in any other saddle. It also has one feature in common with nearly if not all foreign military saddles. This feature will be noticed later.

In advocating a trial of the Stock saddle, I believe I am attacking a strong prejudice existing among army officers; and I further believe this prejudice to be an unwarranted one, based not on any test but simply on a feeling that all belongings of the cow-boy (and therefore of the plainsman) are necessarily of a low standard and not becoming to the needs of the army. It seems to me that the army can well learn a great deal from the experience and practical ability of men who have had to work out their own salvation under conditions very similar to those existing in our service; but with the very important exception that these plainsmen have had to pay for any mistakes or faulty equipments by replacing them, at their own expense, with each improvement in material and pattern. Practical ideas and changes are sure to develop under such conditions, and wits are sharpened by such necessities.

I think no one will deny that the best locality in which to secure the most improved device of any kind will be that locality most dependent on the use of that device. Nor, I think, will any one claim that the incentive for improvement in any such article as a saddle exists in the army itself in such sharpened and active strength as it does among plainsmen, whose pockets have at first to supply and afterwards to replenish or replace their mounts and equipments. It stands to reason that such men will have the best and most suitable outfits, such as will be least liable to leave them stranded when subjected to any unusual call. The best argument in support of this is the fact that these men will pay forty dollars for a saddle to be depended upon for comfort both to themselves and their

horses, in preference to having any other pattern of saddle as a gift.

There are several styles of Stock saddle, but they are all essentially the same, and while they appear different to the eye, they all possess the important features in a greater or less degree of perfection. Throughout the entire West there is virtually no other saddle used; and the riding done by the plainsmen is more constant, harder, and with less attention to a proper seat than that done by troops; yet with it all, sore backs are almost unknown except during "round ups," when the horse must resist repeated struggles of numerous steers each day by means of a rope fastened to the horn of the saddle and running to such part of the steer as may by chance be caught when the rope is thrown by the rider. This is very severe and rough work on the horse's back—much more so than any the soldier has to require of his horse.

I believe comparatively few army officers have ever given any real thought to the merits of this saddle, or have ever done more than look at it and condemn it. And I further believe that if every officer who objects to it were asked if he had ever practically tested it, nine-tenths of them would have to say that they had never ridden one more than ten miles, even if that far. It is hard to get patient consideration of anything that has been condemned without acquaintance and simply because it exists; but if officers would give a little thought to this subject, conceding the possibility of superiority, it seems to me that there would be but few objections to at least a fair trial, and the willingness to be convinced even against their wishes.

I think no officer will deny that most sores are now to be found on the withers—either on top or on the sides—and the next largest number under the cantle. To me this is conclusive proof that the McClellan tree does not distribute the pressure equally, and that a modification is desirable. The Stock saddle does distribute the pressure equally, and this is one of its most valuable features. A large percentage of wither sores are now caused by the pommel arch being too low and too narrow. These two faults show themselves in a most decided manner in the two extremes of the horse as regards his

flesh. When he is fat the arch is too narrow and causes pinching; and when he is thin in flesh the saddle rests too low and bears on top of the withers.

With the McClellan saddle there is no remedy for the first fault, and before the fat horse has been ridden two days he has the beginning of one or two nice troublesome sores on the sides of his withers, followed when he gets thin by another on top; and the result frequently is that after six or eight months he is condemned on account of incurable fistula. We often hear of a remedy for the second fault, and that is the wearing of a second blanket under the saddle. This raises the saddle a little but not enough in all cases. It does, however, keep the horse's back so hot, particularly under rapid or fatiguing work, that we soon see the effects in a general parboiled condition ready to encourage the first intimation of a sore to spread over most of the unhealthy back.

The pommel arch of the Stock saddle is wider and higher, and there is no undue pressure in any condition of flesh on the upper and tender sides of the withers, and none on top in any case. The under surface of the McClellan saddle is smooth as glass, and we faithfully endeavor by tight cinching to make this surface stay in place on a woolen blanket. The result is that from the time the horse is saddled in the morning until unsaddled in the evening he is virtually enduring a compress equal in effect to the full strength of the man who tugged at the cinch strap; and I actually believe that it is not the weight carried that causes bruises of the back, so much as this steady and unyielding compress.

When the rider dismounts the pressure on the back continues. Theoretically, cinches should be loosened whenever the rider dismounts, but we all know that in practice it is rarely done. The usual ten minutes halt is hardly sufficient to readjust a packed saddle and attend to the calls of nature, for which these intervals are frequently demanded.

The under surface of the Stock saddle is the wool side of sheep-skin stitched to heavy leather skirts on which the tree of the saddle rests; and in this respect resembles the

foreign military saddles. I think no one will claim that it is possible for a blanket to slip from under this sheep-skin. Therefore a tight cinch is not needed to keep the blanket in place. It will remain in place without cinching. This reduces the services of cinches to simply keeping one thing (for now the saddle and blanket are virtually one) safely and properly secured to the horse. The conformation of the horse's body indicates plainly the best method for doing this. Instead of one cinch passing over the point of greatest swell of the ribs—not belly—as is the case with the McClellan saddle on the average horse, it seems only reasonable that the best method is to have one cinch pass in front of this point and one behind it, and in this way provide against movement in either direction in the simplest manner. This is the method of cinching Stock saddles, and if horses could talk I believe the cavalry horse would express more sincere thanks for those two modifications than for any other changes that could be made.

Of course the double cinch could be put on the McClellan saddle, but without the lined skirts the tight cinching must continue. These skirts cannot be used under the McClellan saddle, for the simple reason that it is too narrow now in the pommel arch and will not admit of any contraction. At a large saddlery house in Kansas City I lately saw a McClellan saddle rigged as a Stock saddle, and the space for the withers was so taken up with the lined skirts that there was virtually nothing left of it. I believe there is no horse in this command with sufficiently thin withers to wear that saddle one day without distinct injury.

Another desirable feature of the Stock saddle is the readiness with which it lends itself to removing pressure from an injury to the back. The tree is fastened to the skirts by means of leather thongs, and between the tree and skirts pieces of blankets may be placed without the possibility of being disarranged, so as to relieve pressure from any affected place or places. This is more readily understood by examining the saddle than by the lengthy description necessary to explain it. We are told that the same can be done with the McClellan saddle, but I have tried more than once

to put this into practice, and always with the result that in a very few moments after the rider mounted the hole in the blanket was exactly where I did not want it instead of being over the sore; or the additional piece of blanket which had been put on next to the sore in order to relieve pressure on that spot had slipped so as to make its presence harmful.

The packing capacity of the McClellan saddle is undoubtedly good. An examination of an enlisted man's equipment for field service will convince anyone of this fact. The constant attention of officers is necessary, however, to prevent the cante pack from causing sores on one part of the back. In order to allow as much slipping of the blanket as possible, the soldier frequently places it so far forward that the cante rests on its rear edge. If his cante pack is not strapped tightly to his saddle it will settle down and partially rest on the horse's back bone, and an hour's ride will result in a sore that will cause a great deal of trouble. The lined skirts of the Stock saddle project back of the cante and furnish a sufficient pad or cushion to protect the horse from such results of temporary carelessness or accident.

The objection will surely be made that the Stock saddle is too heavy. It is heavier than the McClellan, but so is the apparejo heavier than the old pack saddle, but I do not believe any one would suggest a return to the latter. It has certainly been demonstrated beyond question that a mule can carry a heavier load on the apparejo than on the pack saddle and with more comfort to himself—an acknowledgment that I believe would be made in favor of the Stock saddle after a fair trial. Several pounds could be taken off the Stock saddle by removing certain features that are of use only to the cowboy.

My serious attention was first called to the Stock saddle in the winter of 1895 and 1896 in Arizona. My troop was on a six weeks' trip in the mountains trailing an Indian murderer, who naturally led us over the highest and most inaccessible places. More than half the troop was left at a camp on the Gila River, to which stream we had to return nearly every night for water. This camp was of course changed several times so as to be within reach, and to enable me to

alternate with horses and men in order to keep down sore backs. I had a guide nearly all the time, and I noticed that he never dismounted for any kind of a hill, up or down, while we were walking nearly half the time in order to save the horse's back. To make any distance each day I made it a rule to walk down all hills and up only the steepest ones. The guide in the meantime would get from a quarter to half a mile ahead and would have to wait for me. One period of this kind of work lasted for about a week, during which time I had changed nearly every horse in the detachment each day. With all the care possible I could not get away from sores, while the guide rode his one horse all the time without an intimation of an injury. Before that week was past I determined to get a Stock saddle at the first opportunity. Such a chance presented itself before we returned to the garrison, and from that time until September, 1902, I rode such a saddle whenever on duty outside of a garrison.

If there is a locality in the United States in which to test a service saddle, it is the Southwest; and during my three years' tour in Arizona I fully tested this kind of a saddle. I afterwards had it in Cuba for three years, and as a result of my experience with it I am firmly convinced that it is a more satisfactory saddle for our service than any we have ever tried. Some few minor changes might be advisable, but the principle features should be left as they are. In all my criticism of the McClellan saddle, and recommendations of the Stock saddle, I wish to be understood as expressing my own views and endeavoring to put this important piece of our equipment before you in such a manner as to encourage impartial investigation, in the hope that we shall, by test and experiment, so agitate the question that if a better saddle exists or can be made, our cavalry will soon have it furnished.

FIVE YEARS A DRAGOON ('49 TO '54) AND OTHER ADVENTURES ON THE GREAT PLAINS.*

PART III.

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IN the winter of 1852 Major Chilton went on a six months' leave, which left Lieutenant Hastings in command of the troop. Sergeant Hooper went on a two months' furlough, to the end of his time. Every good man in the troop felt his absence a personal loss. It wound up his ten years honorable service, and he would never return. It was time for him to make a home for himself and family, which, with land warrants and some money that he and his industrious wife had saved, he did in Iowa, and became a prosperous and prominent man. Sergeant John Cuddy was made acting first sergeant until Hooper's time should be out, and three-fourths of the troop hoped he would keep the place. He was born in Ireland, was well educated, bright, clear headed, and a good judge of men, six feet tall, handsome, and a perfect picture of manhood, witty, cheerful and self-reliant. I never saw a better specimen for a first sergeant. He was just what our troop needed. I knew that good order would reign under Cuddy; but there was an element that did not want such a man, and a few of them would do anything to destroy him. After he had been acting first sergeant a couple of weeks, he was visiting a friend across the parade ground, out of quarters in the night without permission. Some miscreants managed to get fire into his orderly room, and the garrison was aroused at midnight by the alarm of fire. When Sergeant Cook and I reached the door and

*This is the third installment of Mr. Lowe's account of his personal experiences in the opening of the West. The first part appeared in the January, 1904, number (51) of the CAVALRY JOURNAL.

broke it down, the room was in flames. The fire was soon quenched, but Cuddy's enemies had gotten their work in; this was sure to prevent his promotion. He was placed in arrest and Sergeant Drummond took his place. Cuddy was released in a couple of weeks and returned to duty, but Colonel Fauntleroy would not consent to promote him.

In April, 1852, Major Macklin, the paymaster for Kearney and Laramie, called for an escort and Sergeant Cuddy and ten privates were detailed. Cuddy was glad to get away with his little command, and did not object to some of the toughest cases detailed to go with him, to get them away from the troop. The man who was the instigator of the fire in the orderly room deserted, and with his wife located in Weston. More of him hereafter.

There was a custom at Fort Leavenworth to detail a noncommissioned officer each month who was called "provost sergeant," and whose duty it was to work the prisoners in policing the garrison, cleaning up generally, and to do anything that there was no hired employees to do. If there was a death the provost sergeant had the grave dug. My turn came and I served during April. It was an odd coincidence, to say the least, that three men died of delirium tremens during that month, two of Light Battery "G" Fourth Artillery and one of the band. I remember the names of these men and can see how they looked as well as if it happened yesterday. These were the only men I ever saw after death from delirium tremens, and the only deaths at the post during the month. I had two prisoners digging a grave in the soldier's cemetery where now stands the commanding officer's quarters. They had gotten down half deep enough when one of them, an infantryman, leaned on his spade, turned to me with a sorrowful expression, and in a sad tone said: "Arah, Corpler, aren't it lucky I am?" I could not see his good luck, it was not apparent on the surface, and so I said, "How is that Mike, have you struck a gold mine?" My question brought no smile. Poor Mike shook his head; leaned harder on his spade, and said: "If I hadn't got in the geard house I might 'ev shared the fate of poor Tom, and yez w'u'd 'ev had somebody digging me grave as

I am his." I said I hoped that such a misfortune would never befall any of us. Straightening himself to his full height, looking at me earnestly, he said: "No danger of yez, Corpler, but look at poor Mike." I suggested that this was a good time to swear off. He sighed and went on with his work. I pitied him with all my heart. The only enemy he had was whisky, and he needed a guardianship that would keep him from it, or keep it from him.

Several men deserted the first pay day after coming in from the summer's campaign of 1851. In March, four of the best men in the troop deserted, and as they had been my friends from first to last, I felt the loss keenly. They made a big gap in the efficiency of the troop. A batch of recruits from Carlisle joined about this time, and special attention was given to drilling them preparatory to the summer's campaign sure to follow. They had spent the winter at Carlisle and were pretty well drilled. They came up on a steamboat.

On the 20th of June I was made sergeant; on the 23d, first sergeant. After the order making me first sergeant was read and the troop dismissed, as I was passing a group of men on the way to the steps leading up to the squad room I heard one man say: "Well, we may as well desert now." The man was slightly under the influence of liquor and evidently intended that I should hear the remark. I walked over to where they were standing, and said: "See here; I don't care what anyone says of me so that I do not know that the words are intended for me to hear. In this case you said what you did purposely for me to hear. Now, it lies entirely with you whether or not you may as well desert. If you intend to be a decent, respectable soldier, there is no occasion for you to desert. On the other hand, if you want to make things disagreeable generally, and for me in particular, the future for you is not bright. Now take your choice, for I tell you plainly that I will not be harassed, worried and annoyed by men who can see no good in anything but whisky, noise, opposition to good order and discipline, and other things that make the troop and all connected with it miserable. I may not succeed in having everything my own way, but I will

come as near to it as I can, and the nearer I come to it the less cause any one will have to talk as you have." The man was about to speak, I do not think disrespectfully, when a man said quietly, "Shut up," and two of them walked him off. Though I spoke in a low tone, probably half the troop heard what I said. The next day this man made an apology and said he would never give me any trouble, and he never did.

I called the roll at "tattoo" without a light, the first time I had seen it done, and without a mistake—called two absentees the second time and reported them absent. I never used a light, nor read from a list at roll call. A general good feeling seemed to develop from day to day, and many men said they were glad it was settled. The most experienced said they would know about what to expect for the next two years, and there was a great deal in that. Lieutenant Hastings had the confidence and respect of all the men whose opinions were worth anything, and that was a tower of strength to me.

The day of departure soon came and we found our way to the Arkansas via Pappan's Ferry across the Kaw and thence through Council Grove.

Arrived in the vicinity of Cow Creek, now in Rice County, Kansas, it became evident that the Kiowas and Comanches were as energetic as usual, annoying trains, surprising small parties, and driving off stock. Several trains were compelled to corral and stand them off until relieved by the Dragoons. Generally the Indians did not stand much upon the order of going when the "long knives" came in sight. Some inexperienced people have charged Indians with possessing less real courage than white men. There never was a greater mistake. The Indians knew that bows and arrows, good at forty yards, could not compete with muskets and pistols at 100 or 200 yards, so they skirmished for the advantage, and took it whenever they could, as became the sensible robbers and bandits that they were.

Arrived on the Arkansas, from the mouth of Walnut Creek west the danger to trains was great. Nothing short of constant, intelligent, determined effort on the part of the commanding officer, Lieutenant Hastings, served to

protect the trains from destruction until he compelled their owners or managers to concentrate in large caravans and proceed with the greatest caution in double column.

One morning near Pawnee Rock, now near the corner of Barton, Stafford and Pawnee Counties, a Mexican train of ten mule teams pulled out of camp. The rear team was made up of seven little mules and three burros. The load was heavy and the team lagged. Suddenly a small band of Indians was seen charging toward this train. The train master did the usual thing, hurried into corral as fast as possible, and succeeded very well except as to this last team, which all expected to see captured and the man and his ten-year-old son scalped. Seeing his desperate situation, the father hid the boy in the wagon under some blankets, in hopes that relief might come to his son, though he must die. The Dragoons had camped west of Walnut Creek, near where Great Bend, the county seat of Barton County, now is, and had made an early start in order to halt this train until others should come up. A few skirmishers on the high ground saw the situation, gave the alarm and charged in time to drive off the robbers, though a shower of arrows had already hit the wagon and slightly wounded the man. One pony was killed, and it was believed that some Indians were wounded, though all got away.

This team was owned by the driver and traveled with the big train for company and protection, and the team being weak for the load it had to haul, was compelled to travel behind, so as not to retard the progress of the train, and frequently lagged. Numerous small freighters were in the habit of traveling in this way.

Probably no better officer than Lieutenant Hastings ever commanded a troop. He was forty years old, had served half of his life in the army—more than fifteen years as first sergeant—and was promoted from the ranks for gallantry in Mexico. One heel had been shot off while he was reconnoitering from a tree near Chapultepec, Mexico. He wore a cork one, was a good walker and fine horseman. This was his second campaign with this troop. And now he was approaching ground sacred to the memory of brave men, and there

was still with the troop a remnant of those who fought desperately at the mouth of Coon Creek, now in Pawnee County, when in 1846 twelve men out of a detachment of twenty under Sergeant "Ben" Bishop were wounded, some of them fatally, in recovering cattle that had been driven off by Indians. Bishop was shot through the body with an arrow, but survived and was discharged first sergeant of the troop in 1849.* Sergeant Peel and Bugler Brydon kept alive the fires that burned in memory of their fallen comrades, and the spirit that pervaded the little command boded no good to the reckless robbers that infested the Santa Fe Trail from the Little Arkansas River to Mexico. The Indians knew the troop, the sorrel horses, the blue shirts worn in the field in place of the regulation uniform, the drab hats, the horses and men that they had seen before when they by forced marches relieved Fort Adkinson. In fact they had not forgotten the sorrel troop since 1846.

Having concentrated the trains and escorted them via the so-called Cimarron crossing of the Arkansas, about where Cimarron station on the Santa Fe Railway now is, to about sixty miles southwest of that point, the troop returned and went into camp about where Dodge City now is, and about four miles below Fort Adkinson. Here the whole Kiowa and Comanche tribes seemed to have concentrated in one vast camp on the south side of the river, opposite the Dragoon camp.

Sergeant Cuddy and his party joined from detached service a day or two later. I quote from what he and others

*Sergeant "Ben" Bishop died at Fort Leavenworth in 1884 at the age of sixty-seven years. At the outbreak of the Civil War he was appointed master of transportation under Assistant Quartermaster General Rufus Ingalls and held the position until its close. He came to Fort Leavenworth in 1866, and was placed in charge of the government farm. While stationed at the post before the war he carried the United States mail for a considerable period between Forts Leavenworth and Kearney. Mr. Bishop, while a member of Troop B, First Dragoons, was detailed with other men of his troop to lay a "stake and rider fence" from rails made on the Fort Leavenworth reservation. He, being the youngest man of the troop, his captain had him lay the first rail. Of this incident Mr. Bishop frequently spoke to his friends. He was born in Newell, Pennsylvania. One of his two sons is the present freight agent of the Kansas City-Leavenworth Electric Railway.—[EDITOR JOURNAL.]

told me: When he returned from Laramie to Fort Leavenworth in July, he was, after a few days' rest, ordered to join his troop. In the meantime the "toughs" of his party got drunk and Colonel Fauntleroy ordered four of them to confinement in the guard house until ready to start—actually had four horses led to the guard house for the prisoners to mount and ride away. Their arms were boxed up in the wagon. The men were mad; they had been kept from liquor, could not get any now, and were going across the plains with no rest except what they got in the guard house. A few miles on the road the mutinous disposition was at fever heat. Four good men rode behind and two in front of them, while Cuddy rode ahead. They cursed the men in the rear because they were not allowed to fall out of ranks, and finally got so bold that they addressed themselves to Cuddy. Then he ordered a halt, wheeled his horse so as to face them, loaded two pistols, placed one—army size—in his holster with flap thrown back ready for use, the other—navy size (his private property), in his belt, and addressing them reviewed all of their misdeeds during the time he had known them, especially the trouble they had given him during the trip and since returning, and wound up by telling them that now they were sober and had not the excuse of drunken men for being insolent, showing that, drunk or sober, they were utterly bad and unfit to live, and then and there assured them that the first man who did or said anything to him or in his hearing in the least disrespectful he would *kill him—he should die like a dog*; he knew they intended to desert and would do so if permitted, but that he would return them to the troop or give their *worthless carcasses to the wolves*. A desperate man, fearless, outraged and thoroughly aroused, is dangerous, and these villains saw that their race was run. He brought them 400 miles into camp and they were placed in the guard house at Adkinson. He told me that these desperadoes had caused him the loss of many nights' sleep on the trip to and from Laramie and from Fort Leavenworth to the troop. Cuddy and six good men were a valuable addition to the troop at this time. Cuddy knew that these scoundrels should not have been let out of the

guard house to go with him, but fearing that Colonel Faunteroy would place a wrong interpretation on it if he asked him not to send them, his pride kept him silent; he would not do anything that would reflect upon his *nerve*; if nothing else would do he would kill them. He would have been amply justified in doing so. The Colonel meant well, but he had not been in Cuddy's place, and could not see into his fine character, nor could he imagine the character of the villains he had to deal with.

Company D, Sixth U. S. Infantry, was at Adkinson, Brevet Captain S. B. Buckner commanding (late governor of Kentucky and candidate for Vice-President on the Sound Money Democratic ticket with General John M. Palmer).

Guard duty was extremely arduous, nearly half the men being under arms among the horses or on post day and night. This constant strain told on the disposition of the men more in camp than on active march. They became tired and morose, and with the cause of their trouble constantly before them, somewhat reckless, and would have welcomed almost anything for a change.

There was no active war. Every day some of the head men of the tribes came into camp to talk with the "white chief," always expressing regret that they could not "control their young men." One day while this kind of farce was being enacted a young buck rushed across the river and reported to the chief, who was talking with Lieutenant Hastings, that a few miles away some of the "bad young men" were attacking a train. Hastings' information led him to believe that there were no trains within 150 miles of him. That a government train and escort was on the way, with which a caravan of freighters had joined at Council Grove, he knew, and he also knew it to be too strong to tempt the Indians to attack. The actions of the Indians and the commotion in their camp made him believe there was something wrong. When "boots and saddles" sounded the interviewers broke for the other side of the river and their whole camp seemed to be under arms. Their horse herds were rounded up and hundreds of the horses saddled. Hastings concluded that all of their fine talk for some days had

been to gain his confidence, and this report was to induce him to send a detail to the relief of the train said to be besieged, thereby dividing his command, so that a sudden rush could destroy the Dragoon camp and probably wipe out the detail afterwards. But instead of dividing his command, Hastings made it more secure by tying all horses to the picket line, all mules to the wagons, and doubling the line of sentinels along the river, thereby plainly indicating that he understood their little ruse.

And now all grass for the animals was cut with butcher knives. Fortunately the grass was abundant, and by moving a little up or down the river it could be had within convenient distance. This episode somewhat dampened diplomatic relations between the wily warriors and the "long knife chief," and the effect on the soldiers mowing grass with butcher knives was anything but pleasant. Such strained relations could not last very long. We soon got a scythe from Adkinson and relieved the butcher knives.

Guard mounting while on campaign was always in the evening. When the old guard was relieved it was marched to the river below the camp, and the musketoons discharged down stream. One fine evening, a few days after the incident above referred to, Sergeant Cuddy marched the old guard off, and having given the command "fire" some of the men deliberately turned their pieces and fired across the river into the Indian camp, not at the people, but hitting the tops of some lodges. Having dismissed the guard, Cuddy reported to Lieutenant Hastings and explained the occurrence. The men were called to account and claimed an accident—a falsehood, of course, but might as well go at that. Every precaution was taken, and with the river on one side and a big ditch running from it, there was perfect confidence in the ability of that camp to defend itself.

About nine or ten o'clock, as the gentle south breeze blew across the river, the rattling of lodge poles was heard—not loud rattling, as if being carelessly handled, but an occasional click, as if great care was being exercised to avoid making a noise. The Indians were surely taking down their lodges. The sound of "tom-toms," that made barbarous

music for the monotonous chant and dance—the war dance, the scalp dance, the squaw dance, and every other dance that had hitherto made their camp hideous till the wee small hours—was not heard on this lovely night. Nothing but the slight rattle of lodge poles; even the dogs were silent. A mounted messenger left camp with a letter to the commanding officer at Adkinson informing him of what seemed to be taking place. Hour after hour passed, and silence reigned supreme—silence that was oppressive. It was like a dead calm when storm laden clouds hang thick and threatening. The hours from midnight to dawn seemed long and tedious. When the sun sent its glimmering rays up the beautiful valley, not a lodge, not a soul or an animal was in sight. Where a few hours before had stood a large city in all of its savage grandeur, with great herds of horses and mules grazing in the vicinity, not a living thing remained save the prowling coyotes—all had silently stolen away. The Dragoons were puzzled.

Mounted vedettes went to their posts upon the bluffs north of camp; from there and from the tops of wagons the Indian camp ground was carefully examined. Peel, Cuddy and I crossed over at some distance apart, for fear of an ambush, while a line of men on the river bank stood ready to support us. For half a mile from the river bank towards the hills and two miles along the river lodge poles and every kind of Indian equipage lay scattered upon the ground. Where each lodge had stood more or less of the family property was left. The poles were all there. In their haste they had taken their best lodges and whatever they could pack that was of greatest necessity to them. In a few hours they had packed hundreds of horses, and mounted on others had scattered in all directions, to meet at some appointed rendezvous, probably hundreds of miles away. Not a lodge pole trail led from the camp.

The men were in high spirits, notwithstanding the probability that after their families were at a safe distance the warriors under the great war chief Satanta (Sawtanta) might make it warm for them. In two days everything desirable for comfort or pleasure had been moved to the Dragoon camp

and the rest burned. Not a vestige of the great Kiowa and Comanche camp remained. The soldiers had killikinnick by the bushel and Indian pipes to smoke it in, and buckskin in every style. Buffalo chips were no longer gathered in sacks for fuel, lodge poles having taken their place.

But these Dragoons were not without sentiment and sympathy. Emblems of motherly love and helpless infancy were found in abundance. Pappoose cribs, buckskin clothing for infancy, maidenhood and old age, robes, moccasins, and trinkets of all kinds, told of the terrible sacrifice the women and children had made, and there was general regret that the helpless ones had left so much of home and comfort behind.

The Indian movement could only be explained by supposing that they considered firing into their camp a declaration of war. But the Dragoons could not understand why so many warriors should be so easily bluffed. They had heretofore been very independent and saucy. While very diplomatic and deceitful, the chiefs who visited camp acted in a patronizing sort of way, leaving the impression that they held the soldiers in utter contempt. They had learned enough to convince them that the superiority of the soldier was in his arms, not in his horsemanship (for the Kiowas and Comanches were the finest horsemen in the world), nor in his strength and prowess as a warrior. These athletic, sinewy sons of the plains were from an ancestry that had been warriors since the race was created, so far as known, and from infancy through every stage of their existence their normal condition was that of warriors and champions of the chase. From instinct and education they were alert, cunning, strategic, recklessly brave, and capable of subsisting where white men would utterly perish. To say that such men given equal arms and supplies, are not the equals, as rank and file soldiers, of any race known to history is bald nonsense.

Two days after the Indian movement the train and escort heretofore referred to, including some artillery, came up en route to New Mexico. Lieutenant Hastings was not expecting them so soon. It seems that Indian runners brought

the news of their approach, and their conclusion was that the troops were coming to help clear them out, and firing into their camp confirmed this belief, hence their sudden departure. It was an odd coincidence.

Major Chilton joined from a six months' leave.

Two weeks had passed, no Indians had been seen, and the two great tribes that harassed the travel and were a standing menace to the commerce of the plains were believed to have gone to Texas, and would probably extend their raid into Old Mexico, as was their habit. This had been a bad season for them. They had captured no trains, no fresh scalps dangled at their bridle bits, and they had met with heavy loss in the destruction of their camp. Peace seemed assured for the balance of the freighting season.

Owing to the great amount of travel, the buffalo kept away from the road, and to procure fresh meat (which we needed very much) it was necessary to go a few miles from it. One bright morning Sergeant Peel and a comrade got permission to go on a hunt as far as what Sergeant Ferguson called "Angel Spring," the head of what is now known as South Fork of Pawnee Fork of the Arkansas, six miles north of camp, it being understood that Sergeant Cook would be out there with a six-mule team about noon to haul in whatever the hunters killed.

At seventeen years of age Langford M. Peel enlisted at Carlisle Barracks as a bugler. His father was a soldier, and Peel was practically raised in the army. He was assigned to "B" Troop, commanded by Captain E. V. Sumner. In the spring of 1864, in a battle at the mouth of Coon Creek, heretofore referred to, Brevet Captain Lovel commanding the troop, Bugler Peel, then not twenty years of age, was credited with having killed three Indians. Three years and a half later, in a battle with Pawnees near Fort Kearney, he killed two, and a month later, one. He was the best specimen of one hundred and sixty pounds, five feet nine inches, naturally bright, clear headed, cheerful and helpful always; as keen as an Indian on the trail, well up in every branch of prairie craft, a perfect horseman, possessing unlimited courage and endurance, he was a man to be relied on

and trusted in every emergency. A full set of such non-commissioned officers under a good commander would make a troop invincible against any reasonable odds.

Peel and his companion arrived early, drank from the lovely spring, watered their horses, and hobbled and picketed them for safety. Buffalo were plentiful, and seemed perfectly at ease on the grazing ground, indicating that they had not been disturbed, and giving assurance to the hunters that no Indians were in the vicinity. Waiting patiently for the buffalo to go to water, in a couple of hours they had two fine ones within a short distance of the spring, cut up ready for transportation. Then they built a fire of buffalo chips, broiled meat, and feasted as only an Indian or a plainsman can; smoked and recounted their adventures. Noon, and Cook and the wagon not in sight. The creek from Angel Spring runs a little east of north; on the east, bluff; in some places, vertical, rocky bluffs from ten to thirty feet above the level of the creek; to the west, some bottom, gradually sloping to high ground. Along the creek, which hugged the bluffs pretty closely, was scattered trees, choke cherry and wild plum bushes, with numerous wild grape vines, forming patches of dense thicket in some places. Little more than a mile north of the spring a herd of buffalo lay in the open bottom. The land lay so that it was easy to approach them, and the wind favorable, the temptation was great.

The campaign had been one of monotonous care and drudgery, and no mounted hunting had been allowed on account of the necessity of keeping the horses in the best possible condition, and this was the first good opportunity to have some real sport. They agreed to make a ten minutes' run to see which could kill the most in that time, the pending bet being a good dinner when they reached "America." Such was civilization called among plainsmen. They approached the herd at a walk, and were within easy pistol shot before the buffalo saw them. Then each went his way, Peel to the west, his companion to the east. The latter dropped his first buffalo in the bottom, the second ran east to the top of the bluff where he fell. The man was

down cutting out the tongue, always the sportsman's trophy, when the voice of Peel rang out, as he came up the hill, "Get on your horse!" No time was lost, and looking east he pointed to fifty or more Indians in a half circle half a mile away, their left wing so far advanced that retreat towards camp was cut off. Consultation was brief. Peel led the way down the hill, circling around a thicket, carefully selecting the firm buffalo grass sod so as to leave no trail, and drew into cover not twenty yards from where some of the Indians were sure to come down. Here they sat on their horses, pistol in hand. They had no future plans; they might have to fight to death under that bluff; they would do whatever circumstances seemed to dictate.

They had not long to wait. The Indians came rattling down the rocky trails leading into the bottom, sending out their blood-curdling war-whoop at every jump. They seemed to think the fleeing men would try to escape towards camp, and be involved in the circle; did not think they would stop to hide, or that they would do anything but run for their lives, which would be sure death. Their greatest success had been against demoralized men who had given up hope and lost their heads, which soon made their scalps an easy prey. One brawny brave drew rein at the foot of the trail where the men had come down, raised himself in his stirrups and looked sharply towards them. Peel's companion, believing they were discovered, and that a signal would bring the whole pack of howling demons, raised his pistol to shoot; but Peel quietly reached over, and placing his hand on his comrade's arm gently pressed it down. In less time than it takes to tell it the Indian was off to the west, showing by his actions that he had not seen them. Hearing no more noise from the east, the way seemed clear in that direction. Peel led the way out, and they quietly walked their horses up where they had gone down a few minutes before, turned south, and gently trotted towards camp, saving their horses' wind for the critical moment which they knew must soon come.

By this time the Indians seemed confused. The hunters could see most of them riding helter skelter and peering from

the highest points to the west of the creek, never dreaming that they had passed the game. More than half a mile had been covered, not away from the enemy but directly south, slipping by, when suddenly they were discovered, and every Indian charged toward them furiously. But the hunters' horses were comparatively fresh; they were on the high ground, and as far south towards camp as the most southern Indian, with four or five miles of nearly level stretch ahead of them, while the Indians had to oblique to the east and rise considerably to gain their level, and they felt that while the race would be interesting, barring an accident they were pretty safe. The greatest danger was that a horse might step in a prairie dog or badger hole and fall, hence they rode with great care.

When fairly under way and all on a level the soldiers were a quarter of a mile ahead. Soon the wagon was seen, Cook's horse tied behind, while he rode with Matthews on the "lazy board," as they smoked and chatted. Then, to attract Cook's attention, and not lose a shot, the two hunters turned in their saddles and fired at the Indians. Quickly Cook was seen to mount his horse, Matthews turned his team, and Cook "interested" the mules with a "blacksnake." About two miles further, and the hunters were close to the wagon. A vedette on the high point north of camp saw something wrong in the distance and discharged his musketoons; then the other vedette on another high point discharged his. In the meantime the Indians had not been gaining on the men until within the last mile, and then only because the team impeded their progress a little. Not half of them had kept to the front; some were a mile behind. Arrived near the vedettes, Matthews was allowed to go down the hill alone to camp not half a mile away. Cook joined the hunters and shooting began in earnest, including the two vedettes, who had been using their musketoons at long range for all they were worth. Seeing the hopelessness of capturing their game, and knowing that a strong force from the troop would soon be up the hill, having lost two ponies and had some of their number wounded, the Indians retreated. At the risk of their lives they always carry off the dead and wounded if possible. When Lieutenant Hastings with half of the troop came up

the steep hill the Indians were well on the retreat, and he followed them only a short distance beyond the crippled ponies. Horse flesh was too precious to be wasted in a pursuit that could accomplish nothing.

No fresh meat cheered the camp that night, but it was a jolly camp. All answered to their names at retreat roll call. There was something new to talk about, as the men sat around lodge pole fires and related the traditions of the grand old troop.

The next day Major Chilton with a part of the troop, including those in the excitement of the previous day, went to the spring, killed more buffalo and returned with a wagon load. No Indians were seen, and the wolves were feasting on the buffalo killed the day before. Of course, Major Chilton examined the ground that Peel and his companion had gone over, including the hiding place and the race course.

Now, when Peel discovered the Indians he was half a mile west of his comrade and nearly one and a half from the Indians. He could have easily escaped by going south towards camp. He had scarcely one chance in ten to save his friend, but he took that chance, such as it was, in the face of almost sure death. He saw the thicket and the steep shelving bluff as he went up the hill. To hide there seemed the extreme of recklessness, but he builded better than he knew. Until that moment he had no idea how to act unless they got on a high point and with their pistols stood off the Indians until help should come. The latter was all he hoped for, and he knew that if Cook saw the situation, that hero in every emergency would join the two or die. One iota of weakness would have induced Peel to abandon his friend and save himself, and how easily Cook could have left the teamster and rode to camp for the troop, as many a coward has done, and been counted a hero for the noise he made. But no such weakness troubled his manly soul. Like Peel, he was a born hero. The vedettes on the bluffs could have pulled their picket pins, mounted their horses and rode into camp after discharging their guns—such were their general directions; but they saw their comrades in trouble, and Charles McDonald and Edward O'Meara confirmed the faith that they had in them.

And what became of the Indians who pursued the hunters? A freight train returning from New Mexico saw a band of Indians—supposed to be the same—some distance south of the Cimarron Crossing a day or two later, and corralled to stand them off, but the Indians seemed in a hurry and did not trouble the train. These were the last Indians seen on the trail that season.

To put in a little more time and make sure that there was no further danger to trains, Major Chilton went up the river about ten days, traveling about five miles per day—going through the skirmish drill all the way—the principal object being to get fresh grass and exercise for the horses and practice for the men. We returned leisurely along the trail, met F. X. Aubry, the champion rider of the plains, Colonel William Bent, of Bent's Fort, and Maxwell, of Riado, New Mexico. All were of the opinion that the Indians would not return to the trail that season. From Pawnee Fork we made time for home—Fort Leavenworth.

At Council Grove we got corn—the first in two months—and fed a quart to each horse and mule night and morning from there in. Our horses were thin in flesh but otherwise in good condition. We had but the two company wagons for transportation of rations, tents and other camp equipage. Of course, we drew rations at Adkinson when necessary.

All the way in the grass was dead. Plenty of buffalo from Pawnee Fork to the east line of what is now McPherson County, and turkey on every stream. They had never been hunted, hence not easily scared, and were big and fat.

On arriving at the fort the Major found an order waiting for him to escort and act with Major Ogden, quartermaster, to locate a new military post near the junction of the Republican and Smoky Hill branches of the Kaw River. In three days fifty men had clothing replenished, rations and forage drawn, some horses shod, and were on the road. Sufficient transportation was taken to haul corn for the animals. The most unserviceable men and horses were left behind, Lieutenant Hastings in charge of them. The Santa Fe Trail was followed to the crossing of Soldier Creek, four miles north of Pappan's Ferry, thence to Silver Lake—up the Kaw through

St. Mary's Mission, where Father Deurinck had a flourishing school for Pottawatomie children, thence fifty-two miles to the junction of the rivers above mentioned. A week was spent in that vicinity, resulting in the location of the new post, afterwards named Fort Riley, about 130 miles from Fort Leavenworth. A band of Delaware Indians returning from a buffalo hunt said there were plenty of buffalo twenty-five miles west of the new post. We were never without turkey after reaching the Big Blue River until our return. It was a little late in the season, nights cold, but no rain or snow, and with big fires and plenty to eat, the trip was rather pleasant.

Having arrived in Salt Creek Valley, three miles from Fort Leavenworth, Major Chilton made a speech to the troop, in which he gave them excellent advice concerning their conduct in garrison. (Major Ogden was a strictly temperate, religious man, and I always thought that he inspired this speech.) They had made a good campaign, a campaign that should be a credit to any troop. Unfortunately there were men who would become intoxicated, get in trouble and cause trouble for every one having anything to do with them. He advised them that whiskey was their worst enemy, and if they drank at all not to get drunk, and assured them that leniency for those who did need not be expected, for he would not have his troop destroyed in that way. I think that speech did much good; moderate drinkers watched the fellows who had little control of themselves, and curtailed the excesses.

Heretofore during winter about ten per cent. of the troop were undergoing punishment in the guard house, much of the time by sentence of garrison court martial— forfeiture of pay and time in the guard house— nearly all of the offenses growing out of drinking whiskey. I talked with the noncommissioned officers about it, and cautioned each one in charge of a squad to give personal attention to their men and stop any man who seemed to be verging on the danger point in drinking, and if he could not control him bring him to me. Sometimes a man was brought to me and I shut him in a store room to sober off and then put him on extra duty for punishment. During the winter we had several company courts

martial, three noncommissioned officers sitting in judgment, and the proceedings reviewed and acted upon by the first sergeant. Of course, the written proceedings were not very voluminous. The result was, no man was tried by general or garrison court martial; summary courts were unknown. Another result, some men were doing extra guard and fatigue duty instead of loafing in the guard house and letting better men do their duty. When a man could not be managed without violence he went to the guard house, but much of the time "B" Troop was not represented there.

If punishment was not immediately meted out to an offender, his record was fairly kept and he was sure to be called on for the next fatigue party (details for fatigue to do some kind of dirty work), and during the whole winter scarcely a decently clean soldier was called upon—always the troublesome fellows got the job. Twice the findings of a court and the approval of the first sergeant were appealed from and the parties sent with a noncommissioned officer to the Major, who heard their complaint, and sent back word to me that if I had any more trouble with them to put them in the guard house. No officer ever saw the proceedings of the company courts; they did not want to. I gave all the dissatisfied ones to understand that if they had any grievance I would send them to the Major to make their own statement.

Of course we did not always have peace and happiness, nor freedom from drunkenness, but we came nearer having *home rule—self government*—government within the troop and by the members of it than any of the oldest members had before seen. It was a little binding on ten per cent. of them who were taught many good lessons in respectful demeanor and language towards noncommissioned officers; they could not hide insolence and abuse under the cloak of drunk, and hence not accountable. There was much whiskey drunk and no effort made to conceal it. "Budgen-ken," a sort of company club, in a place fixed up between the two stables, was always supplied, each drinker "chipping in" to buy whiskey, and the men were given to understand that any abuse of the privilege would insure its destruction. No

whiskey was allowed in the quarters, a rule which was closely lived up to.

Soon after returning to quarters, the Major came to the orderly room and broached the subject of a company library. He had learned the cost of "Harper's Classical and Family Libraries"; a pair of book cases, with hinges closing the edges on one side, and two locks the edges on the other side, held the library of uniform size and binding. When open the title of each book could be read, and when closed no book could move or get out of place; the books were all the same length and breadth, and an excellent collection. The Major led off with a subscription of \$25.00. I followed with the same, Peel the same, then followed a calculation of what percentage would be due from each man in proportion to his pay to make up enough to pay for the whole. I took the list with each man's name. The Major spoke to the troop on the subject at retreat roll call, explaining to them the advantages of so much good reading matter, and before dismissing the troop I requested each man who wanted to subscribe to come to the orderly room and sign the list pledging himself to pay the amount opposite his name on pay day. Most of the men off duty and *at liberty* signed immediately and the others soon after, and the library was assured with scarcely an effort. The Major collected the money at the pay table, and the books in their cases came on the first steamboat in February. Of course the library was sure to give me some trouble, but it was so popular and had such a good effect that with Bugler Brydon's help I got used to it and ceased to look upon it as a burden. Compared to present usage there was little writing to be done in transacting troop business, and I never had a regular clerk. Lieutenant Hastings always assisted with the muster rolls and anything else that I asked him to; he liked to do it; and by calling in a man for two or three days in a month I was never much crowded with writing.

Our troop ball came off—a decided improvement over that of the previous winter.

A few recruits from Carlisle came up on a steamboat soon after we came in. The lance sergeant in charge, a cul-

tivated gentleman, said little about himself except that he had experienced ups and downs in business; had lived some time in Cuba, and knew considerable of the business world. He seemed to have no bad habits, and was soon made a corporal. He made the next summer's campaign and spent the following winter with us, and was discharged in the spring of 1854 by order of the Secretary of War. He was the son of United States Senator Clark, of Rhode Island. He was commissioned first lieutenant First—now Fourth—Cavalry when it was authorized in 1855, served a couple of years and resigned to take a position in a business house in Leavenworth. Drifting along with varying fortune, he became hospital steward of the Military Prison when it was established, and died there several years ago. I have mentioned this case to show the ups and downs in some good men's lives.*

Another man in this same squad of recruits was a tall, fine looking, rather polished man, with a fine set of dental instruments, and proved to be a fine workman; a genial, cheerful fellow, he made friends easily (Worrell by name), became a corporal, then a sergeant. But I skip his history

*Hartford T. Clark was born in 1827, and is a descendant of Revolutionary stock of prominence. His maternal great-grandfather was none other than Stephen Hopkins, one of the two delegates from Rhode Island who signed the Declaration of Independence. After learning the trade of a pharmacist he enlisted in the army in New York, and was sent to Carlisle Barracks, Pennsylvania, from which he in due time reached the First Dragoons. Upon his discharge from the service he was appointed a first lieutenant in the same regiment, the date in the records being given as March 3, 1855, an appointment which expired by limitation May 1, 1856. He again enlisted in the army, and his knowledge as pharmacist being valuable, was appointed a hospital steward in January, 1860. He served as such much of the time at Jefferson Barracks, having been transferred there from Fort Leavenworth, and was discharged July 30, 1863. He is again found in the army in 1875, for early in that year he was appointed hospital steward again and assigned to duty at the U. S. Military Prison at Fort Leavenworth, where he served until the date of his death, June 7, 1881. Prior to his death he made a request of the military authorities that upon the death of his wife her burial at his side be permitted. A lot was so left vacant, and upon her demise, in 1897, her body was deposited in the spot she had hoped some day to be placed to be near her husband. She was the granddaughter of Count DeSanno, who came to the United States with Lafayette and later located in Pennsylvania. Mr. John Clark, the eldest of two sons and the second of five children of Hartford T., is at present employed as assistant engineer in the Quartermaster's Department at Fort Leavenworth.—[EDITOR.]

until I left the troop, of which he hoped to be first sergeant at the expiration of my time, but through my influence failed, and was the only man that I did not shake by the hand and say "good by" to when I left the troop. To be brief, he got discharged when the First, now the Fourth Cavalry, was raised, enlisted and was made first sergeant of one of the troops, served about a year and then with some company funds and the farrier of his troop deserted, taking with them horses and equipments and pistols. Down towards Jefferson City, Missouri, they stopped at a plantation for the night and there met a Mr. Gordon, chief engineer of the Missouri Pacific Railroad, then being built between St. Louis and Jefferson City. In the morning all three left the plantation on horseback traveling the same road. A few miles on the road Worrell shot Gordon from behind, robbed him of considerable money and hid his body in some brush. But the history of this case, the capture of the murderer and his execution after several trials, in which his good father and mother spent much money, is recorded in the proceedings of the courts, and I refer to it here partly to gratify my vanity, and to prove the correctness of my judgment in regard to this man's character.

Spring came, and early in April we were on the way to the Arkansas. The desertions during the winter were not numerous, and they not damaging. A few horses had been turned over to the Quartermaster and new ones received, so that we were again well mounted.

Fort Adkinson was to be abandoned, and in its stead a camp established on Walnut Creek near its confluence with the Arkansas. We took along teams and citizen teamsters to transport the government property from the Arkansas to the new camp, and utilized them to haul forage for our horses, so that we were able to feed two quarts of corn to each horse every day for some time, and finally came down to one quart. We were supplied so that we had some corn all summer.

This was one of the most trying seasons in my experience.

Having spent the night at Cow Creek, the next camp would be "Big Bend" of the Arkansas, eighteen miles. About midway between these points, now in Rice County,

was a line of high sandy hills, called "Sand Buttes," sometimes "Plum Buttes." With his usual prudence and forethought in passing through broken country and in crossing streams, a habit which had enabled him to travel with one troop through all the tribes from the North Platte to Mexico, and from the Missouri to the mountains without being surprised, the Major threw out skirmishers, a corporal and four men, riding twenty-five or thirty yards apart. Having reached the highest "Butte" the corporal discharged his pistol, the four men rallied on him, the troop moved forward quickly, part thrown out in line of skirmishers. Ten yards from the corporal was a dead Mexican, and within a hundred yards two more. One was still breathing, and blood was trickling from their scalped heads. Away down towards the Arkansas was a large Mexican train. The dead men belonged to it, and were hunting antelope in the hills when killed. Ponies and arms were gone. They were evidently completely surprised. After following the Indian trail a short distance it was completely obliterated by countless thousands of buffalo tracks. The Mexican train was corralled on the plain below and the Dragoons moved to it, but they had corralled to let the herds of buffalo pass by, and had not seen any Indians.

From Cow Creek to Coon Creek travel was nearly blocked by buffalo. Standing on any high point as far as the eye could reach, a vast moving mass could be seen, making the earth tremble with their trampling and bellowing.

We arrived at camp near Adkinson; "D" Company Sixth Infantry moved to the new camp on Walnut Creek; Major Chilton and Lieutenant Hastings located in the commanding officer's quarters, which was a pretty comfortable sod building, and the men of the troop occupied the soldiers' quarters.

Sergeant Cook, acting wagonmaster, made regular trips to and from the new camp, moving everything that could be utilized in completing it. On one of his trips, one morning after leaving camp on Pawnee Fork, Cook was asleep in the front wagon; he never got a good night's sleep on these trips. His little escort of two infantrymen to each wagon was also asleep. The teams were moving along up the in-

cline from the Pawnee Fork bottom to the dry route by the head of Coon Creek, when suddenly a band of Indians came up, stopped the train and demanded a feast, etc. Cook hurried out and mounted his horse. He was pointed out as the chief, and to their demand for "tobac" he said "No," when the leader hit him a vicious blow with his "quirt" or riding whip and raised his bow and arrow. Cook shot the Indian, who fell from his horse, and shot two more who clung to their horses as they ran off. The escort was out of the wagons by this time, but Cook had done the work and the band was gone, about a dozen. Realizing that probably this was only a small party from a larger force near by, Cook straightened out his teams, left the dead Indian and made the best time he could. This happened about 9 A. M. The next morning before sunrise a vedette called attention to a train down the road some miles traveling unusually fast. I reported to Major Chilton, who told me to mount ten men and go down to meet the train, which I did, and met Cook two miles below camp. He had traveled over fifty miles in twenty hours, watering and feeding a little twice. He knew the Indians to be Osages, supposed to be entirely friendly, but stealing and robbing whenever they could bluff a small party. A detachment of dragoons accompanied the train the next day, which wound up the moving.

News had come that a "pow-wow" was to be held at or near Adkinson during the summer, and large amounts of presents would be distributed; that in addition to the Kiowas and Comanches, the Prairie Apaches would be there, and that Major Fitzpatrick on the part of the Indian Department would superintend the distribution. Of course it meant the three tribes in full force.

Until the final movement of Indians after the distribution of presents one-half of the troop was on guard at night and one-fourth during the day. Sentinels called the number of post, the hour and "All's well!" every half hour during the night. In daytime the horses were herded a short distance below the post. The Indians were not allowed north of the river unless visiting by permission.

This condition of things lasted two months. Major Chil-

ton had a great many talks with leading men of the Kiowa and Comanche tribes. Sawtanta, the war chief of the Kiowas, always came rather neatly dressed in fine buckskin, and wore a handsome cavalry saber and belt. He was a man about five feet ten, sparely made, muscular, cat-like in his movements—more Spanish than Indian in his appearance—sharp features, thin lips, keen restless eyes, thin mustache and scattering chin whiskers that seemed to have stopped growing when one to three inches long. At the time of which I write he was about thirty-five years old. He invariably came with one servant, a Mexican Indian, to the line of sentinels, dismounted, leaving his handsome horse and Spanish equipments with the servant. Always before allowing an Indian to come inside the line of sentinels the sergeant of the guard was called, who escorted the visitor to the commanding officer, permission having been given for the visitor to come in.

Usually the conversations between the Major and Sawtanta were apparently pleasant, though sometimes the latter became somewhat emphatic. He complained of the treatment the Indians received from the whites, the manner in which they overran the country, destroyed the game and ignored the Indians' rights, and his eyes flashed as he jammed the end of his saber scabbard into the ground. Sometimes the Major recounted the efforts made by the government to look after the welfare of the Indians, and the treacherous manner in which such efforts were taken advantage of. Sawtanta, excited, and his black eyes flashing, was scarcely a match for the Major whose big black eyes fairly blazed when he chose to be emphatic. The Major always tried to be pacific and just, admitting many wrongs that Sawtanta complained of, but never permitting a threat, even by innuendo, to pass without an emphatic rebuke. He felt that Sawtanta was a superior, intelligent man, and treated him as such. There was a good deal in common with these two men. Both had tempers easily excited, unbounded energy, boldness and courage. Educated and civilized, Sawtanta would have been a match for the Major anywhere. In cunning, Indian duplicity and shrewdness he was a full match; but the Major was not a man to be

trapped, flattered, coaxed, driven or bluffed, and if the combined Kiowa and Comanche tribes had him surrounded he would roll his black eyes with their broad white borders, defy them and threaten to "wipe them off the face of the earth," a favorite threat of his, and no man living could come nearer making them believe it. Every man of his troop capable of imbibing a stern determined spirit of defense knew that his threats, though sometimes extravagant in the face of overwhelming thousands, would be defended to the bitter end. His watchfulness, care, prudence and clear conception of Indian character were his best safeguards. He could never be caught napping; there was no earthly danger of surprise, and no seventy-five men under such discipline, with such a commander, armed as we were, had been overwhelmed by men carrying bows and arrows and lances only; hence staunch, steady confidence, from which there was no swerving, reigned supreme in our camp, and men endured the hardships without complaining. About the most comfortable place during the heat of the day was under a tent fly stretched near my orderly room, and there I had a good opportunity of seeing and hearing what passed between the Major and others.

One day when the conversation had been quite animated, the Major looked steadily at Sawtanta and made an emphatic assertion of what he would do if certain trains then on the road were interfered with. Sawtanta always spoke Mexican Spanish in talking with the Major who could understand fairly well what he said, but when in doubt had the interpreter tell him. The interpreter talked wholly by signs, never speaking a word to Indians. He was a wonder in that way, and understood the sign language of every tribe on the plains. The Major talked entirely through the interpreter. Although a mountaineer and desperado, the Major's threat was so bold that he was afraid to interpret it correctly, hesitated and made few motions, all of which the Major noticed, and Sawtanta's mild, unconcerned attitude convinced him that he had not been fully interpreted, and he called for a file of the guard, which came quickly and Pyle (the interpreter) found himself tied to the wheel of a cannon which stood near by, and there he remained until dark, when he was con-

fined in the guard house, to remain, as the Major said, "until he could tell the truth." "A life sentence," said O'Meara. Sawtanta was made to understand the threat, and why the man was tied to the wheel. He soon took his departure, and did not come again until Major Fitzpatrick came to make the "big talk," as the Indians called it. Strange as it may appear at this time, there was no representative of the Indian Department except Major Fitzpatrick, none of the army except the officers of "B" Troop, and no correspondent to write up the grand "pow-wow"—30,000 Indians, Apaches, Kiowas and Comanches. To-day the principal newspapers of the country, including the illustrated papers, would have special correspondents on the ground. At that time any one except the necessary officials, attaches and military officers would have been an incumbrance.

In a smaller way this was as important a distribution of presents to the Indians as was that in 1851 at the mouth of Horse Creek. If it had any newspaper record I never heard of it. The big ox train came in, the wily Apaches (called Prairie Apaches to distinguish them from those ranging in southern New Mexico and Arizona), the Kiowas and Comanches having assembled in full force, the goods were unloaded, boxes and bales opened, the nabobs of the tribes decorated in brilliant uniforms, medals and certificates issued, goods parceled out, winding up with plenty to eat, feasting, sham battles, etc. The Apaches were off their home ground and anxious to return. Major Fitzpatrick seemed equally anxious to have the job over with and kept his little working force and a couple of clerks pushing things. The long drawn out dignity of the Horse Creek treaty was lacking.

Major Fitzpatrick had the confidence of these as he did of all other Indians on the plains. They claimed that in the twenty years they had known him as agent or trader he had never lied to or tried to deceive them in any way, and that his advice had always been good—a certificate of character that few could get.

The presents having been distributed, the Indians went south, probably not to return during the season; all the available material at Adkinson had been moved and the sods

level to the ground. We had not seen a buffalo in more than two months or any fresh meat of any kind except some prairie dogs which Peel and I killed with the only rifle in the troop; no one hunted with it except us. The musketoons did not shoot accurately enough, and no one was permitted to waste ammunition. From time to time we killed enough of the little barkers to make a stew, and found them quite as good as the common gray squirrel. Parboiled and then stewed with a little fat bacon made them taste pretty well to men who had been so long without fresh meat. Owing to the proximity of the Indians there was no other game to be had.

From our surroundings during the last month we were in a critical position. It would take but a spark to inflame the powerful tribes confronting us, and several happenings seemed to have brought the climax. A lot of trains were corralled a little below and not permitted to pass on until the distribution of presents and the Indians had moved off. To detail the incidents would be tedious and unnecessary to this narrative. For a month Lieutenant Hastings and I divided the night between us, half and half, each acting as officer of the guard and often walking from sentinel to sentinel all the way around the line, half the company on guard and half the guard on post at one time. I relieved Lieutenant Hastings at midnight and tried to make up sleep by an afternoon nap. The quarters were full of fleas, the old sod walls full of mice and snakes, and were soon abandoned for the more comfortable tents. Compared to fleas, bedbugs are pets. Spread out a soldier's blanket and see thousands of fleas hopping from an inch to a foot high, enjoying the warm rays of the sun and exercise, after a successful night with a soldier. The two dozen cats that Lieutenant Heath brought from Fort Leavenworth two years before were perfect wrecks; they could not digest mice enough to counteract the ravages of fleas, and moped about utterly discouraged.

The Indians had been gone a week, the Mexican trains straightened out up the river, the troop escorting them to the Cimarron crossing and two days south of it, returned to the crossing and went up the Arkansas to "Big Timbers"

(Bent's new fort), and returned to Adkinson, now only heaps of broken sod leveled to the ground, so that from it the Indians could not ambush mail carriers, express riders or other small parties.

It was the 1st of October when we left the vicinity of the dismantled fort to return to Fort Leavenworth. One day we camped at the mouth of Coon Creek, on the Arkansas, about noon. This was "B" Troop's battle ground, where in the spring of 1846 Sergeant Bishop with twenty men recovered a herd of 400 oxen that had been stampeded by Indians heretofore referred to. Peel explained to the Major all the interesting features of the fight.

On the opposite side of the river was a line of high bluffs, craggy and abrupt, with some buffalo trails leading out on to a narrow strip of bottom land between the river and the bluffs. Buffalo on the south side were numerous, and little bands came out of the bluffs across the bottom to the river to drink. I took Company Teamster Matthews with his saddle mule with me and crossed over. When a buffalo had been killed we were to pack Matthews' mule and bring to camp all the meat he could carry. After winding around through the trails in the bluffs for some time I killed a fat cow between the bluffs and the river. We picketed our animals and proceeded to prepare the meat for transportation to camp. We were busy cutting up the buffalo when we heard a splashing in the water; looking up we saw Lieutenant Hastings with half the troop coming at a trot. This trotting crossing the river meant urgency, and we mounted at once. It was all clear to me that nothing less than Indians skulking after Matthews and myself induced the rapid movement towards us. We joined Lieutenant Hastings, who said that some Indians had been seen watching us, and the last seen of them they were creeping towards us through the bluffs. Lieutenant Hastings wanted to get around them or behind them so they could not escape. I showed him a trail that I thought might lead to their rear. He left half the men to watch the trail that the Indians were believed to be on while we moved quickly on the trail that I believed would cut off their retreat. Sure enough we drove them out, found

them to be Osages, four in number, and did some loud talking to keep Cuddy, Cook and others from shooting them as they came out. They professed all sorts of friendship, but did not succeed in convincing any one but that Matthews and I owed the safety of our scalps to the fact that they were seen by a vedette near camp, and the prompt action of the troop. We finished the buffalo, loaded the mule with all he could carry and brought the Indians to camp. Major Chilton turned them loose with a threat to "wipe the Osages off the face of the earth" if they did not keep off the traveled road and leave white people entirely alone.

Nothing of special interest occurred until we reached Diamond Springs, now in Morris County. The weather had been frosty at night and days sunny—a continuous Indian summer all the way—grass dry as powder. We had barely a quart of corn per day for each horse, and they were poor. All day we had seen little bands of Indians two or three miles off the road traveling the same direction that we were, and apparently watching us. This was the Kaw country and probably no other Indians were there, and we could hardly understand why they kept aloof and watched our progress. Of course the Kaws knew our troop by the horses, and we knew they had no love for it, but were slow to believe they would attempt to do us any harm. We camped on high ground a little east of Diamond Springs, on the south side of the road. We had been very careful of fire all the way in, and here we were especially careful on account of the dense growth of grass and consequent danger of burning the camp. We had finished dinner, about two hours before sunset when, as if by one act, fire broke out in a circle all around us not more than a mile from camp. A stiff gale was blowing from the south, and when we noticed it the fire in the tall grass was roaring furiously and the flames leaping twenty feet high. Quickly we commenced firing outside of our camp, whipping out the fire next to it, thereby burning a circle around it. Every man used a gunnysack or saddle blanket and worked with desperate energy. The utter destruction of our camp was imminent, and we faced the fire like men who had everything at stake. Success was ours,

but the battle left its scars on nearly all. I have never seen fifteen minutes of such desperate work followed by such exhaustion—scarcely a man could speak. Blinded by smoke, heat and ashes, intuitively we found our way to the creek, bathed our burned hands and faces, many of us terribly blistered. My hands and face were blistered in several places; my mustache and whiskers, the first I had ever raised, were utterly ruined; even my eyebrows were badly scorched. I could not wash on account of the blisters, and dipped my face and head deep down into the lovely spring water and held my hands under to relieve the pain. My experience was that of most of the troop. We had quite a quantity of antelope tallow, which was warmed and gently applied to our sores. Undoubtedly the Kaws had set the fire to burn us out, and while they did not quite succeed, if they had seen us they should have been fairly well satisfied. I think that Major Chilton and Lieutenant Hastings were better satisfied with the troop than they had ever been before. Men who could stand together in such a fight and win could stand against desperate odds anywhere. I was instructed to notify the troop at retreat roll call that we would start at daylight. The guards were doubled, and we rested as best we could.

Just out of camp we met the sun squarely in the face, but fortunately it soon became cloudy, which was a great relief. At Council Grove we got some corn from Hays & Company and went on to Big John Spring, three miles east, where we camped at noon.

Major Chilton told me to be ready to go back to Council Grove right after dinner. When I asked if I should take any one with me, he said, "No, you will go alone." About half past one I reported myself with horse saddled (an extra one which I took to save mine). He gave me a sealed letter directed to myself, and told me I could read it on the road to save time. Inclosed in my letter I found one directed to Mr. Hoffaker, a young man who was school teacher of the Kaw Indians, requesting him to furnish me an interpreter which he (the Major) had spoken of when he came through the Grove. My instructions were to proceed with the interpreter to the Kaw village, said to be three miles down the Neosho

River, and there make a demand of the chief that he have five horses, stolen the spring before from some "mounted rifles" camped at Walnut Creek (now in Barton County), brought to his (Chilton's) camp at Big John Spring.

Mr. Hoffaker had the interpreter ready, one Batteese, a Pottawatomie by birth, but married to a Kaw and living with them. Batteese talked good English and was quite intelligent, but when I told him that I was after stolen horses and would make a demand on the chief he seemed reluctant to go or would rather go without me (he lived with the Kaws and was afraid to make enemies). Of course, I could not send him; my orders were to go myself. When we arrived at the village three miles down, we learned that the chief was at the lower village, two miles farther down, and there we went. We found the chief, whose name I regret to have forgotten, in a round house built of mud and willows at the west end of the village. An Indian woman came out as we went to the door and we found the chief alone, lying on a willow mattress, not feeling very well, as he told the interpreter. However, he was dressed and talked pleasantly in reply to all I said. He believed there were some government horses among the Kaws that some of the young men claimed to have *found*. While we talked, Indians came in and packed the house full, and a crowd stood outside. Most of them had no arms.

My appearance seemed to be quite a source of amusement for a lot of young bucks, and they nodded and chatted about me in a merry way, and I knew they had reference to my burnt face and hands tied up in rags, and doubtless the scoundrels who set fire to the grass were before me. For some time I had not said anything; I wanted to kill a lot of Kaws; they seemed to know that I was suffering mentally as well as physically, and were amusing themselves at my expense. I could see that the chief was embarrassed. He seemed to be a sensible, good man, and these thieving scoundrels were riding over the country committing depredations and causing him a lot of trouble. Finally I rose to go, and told the interpreter to say to the chief that my captain knew the Kaws had the five horses, and that they stole

them from a camp on Walnut Creek last spring, and that unless they were delivered in camp at Big John Spring the troop would come down and take them. I did not want to offend the chief, but to impress the thieves. I spoke in rather an angry tone, and the interpreter hesitated. I turned to him abruptly and said: "Interpret what I say, quickly, every word of it." An Indian about thirty years old, who was known as Clark, had been watching me closely, and at this juncture he spoke in plain English: "Who tole you I stole um horses?" "No matter," said I, "who told me, I know you stole them, and unless they are in my camp by the time I get there I'll make you sorry you did steal them." I shook the chief's hand and said "good by" and came out through the crowd, the interpreter following. We mounted and galloped off. About four or five miles, mostly up Big John Creek, brought us to camp.

I reported to Major Chilton all that had happened, and wound up by saying that I hoped my threat would be carried out. The interpreter was much agitated, and said that he thought the horses would be brought in by to-morrow. "To-morrow!" said Major Chilton, "they'll bring them to-night, or I'll teach them a lesson they'll never forget, the thieving scoundrels. I don't propose to make another campaign against the Kaws in winter. I am here now, and while I don't want to hurt innocent men, half the Kaws ought to be wiped off the face of the earth, and my men have a mighty good excuse for doing it. Sergeant Lowe, take twenty men and bring the horses or the chief; I'll show them."

My saddle was changed from the extra horse I had been riding to my own, and in a few minutes twenty as good men as ever roamed the plains were in column of twos on the way with me to the Indian camp. We left our sabers in camp, they rattled too much, taking our revolvers only and plenty of ammunition. The interpreter was cautioned by the Major to interpret as I directed him. As I rode away the Major cautioned me to be prudent, and not hurt the chief. A low line of bluffs or hills formed the east bank of Big John Creek to within half a mile of the chief's house, which was at the upper or west end of this village. Before

passing this point I halted and told the men to follow the leader in each rank, pistol in hand but not cocked, to keep their ears open for orders, and to do just what they were told and no more. Privately I told Cuddy I would go to the left door, which was on the east side, and he would go to the right and meet me. This part I did not want the interpreter to know, fearing that he would not go with me if he did. Sergeant Peel was in the rear of the line behind Cuddy, and Corporal Ferguson in rear of the line behind me; they would see that my plan was carried out, good or bad. We passed the point at a walk, then "Trot!" "Gallop!" "Charge!" came in quick succession.

I sprang from my horse at the door just as it was opened by the chief, who ran out at the sound of the horses' hoofs. Cuddy dismounted almost at the same instant. I seized the chief by the left arm and Cuddy by his right, and placed him on a horse behind another man, mounted, and were started in less time than it takes to tell it. The chief saw at once that he was a prisoner and went willingly. Instantly there was an uproar all over the village, men, women and children howling in every style. The bucks rushed out with guns and bows and arrows as if to give battle. The chief turned on the horse and rode backward, gesticulating and talking at the top of his voice. I told the interpreter that if a shot was fired at the dragoons I would kill the chief and him too, and impressed upon him the importance of repeating this, which he did vigorously and continually, and the chief kept up his exhortation till we were out of reach.

We moved off at a walk in extended line a pace or two apart, every man with pistol in hand turned in his saddle ready to shoot, Ferguson and Peel giving strict attention to the men. I brought up the rear with Cuddy and the interpreter behind the chief. Just as we reached the point of bluff heretofore referred to, a man was seen coming as fast as his horse could bring him riding bareback. It was O'Neil, and he had been sent in haste by the Major to tell me to return, that three of the horses had been brought in and the other two promised. It was too late, and we took the chief to camp. He was one of the Major's prisoners of January,

1851, and they shook hands. The chief was much agitated and distressed. As I made my report, I felt sorry for him.

While the troop's verdict was a justification of the action, the more I thought of it the more I did not feel at all proud. Only for smarting from the outrage of attempting to burn our camp and the wounds from which we were suffering, we would all have condemned it, and I became convinced that I had been guilty of an outrage on a man who had been guilty of no wrong, in order to recover some horses that had been stolen by some thieves of his tribe. And now came the other two horses and some head men and sub-chiefs, but none of the thieving young bucks. A very earnest talk followed, in which the Major recounted the wrongs they had been guilty of, including the attempt to burn his camp the day before, and promised them if he had to come from Fort Leavenworth another cold winter to look after them he would "wipe the young bucks off the face of the earth." And he exhorted the chiefs and head men to control the bad young men in their tribe if they had to kill them. This story has been told ever since the occurrence in various forms, often greatly exaggerated. The reckless element undoubtedly predominated with all of us at that time. Smarting as we were, we were unfit to be trusted to deal out justice in such a case. Whatever of wrong was committed the blame was all mine, and it took me some time to realize the extent of the outrage upon a harmless man. In camp and quarters men delighted to relate the incident, never for a moment dreaming that a wrong had been done; but fifty-one years later, while few remember it (probably I am the only living member of the party), all false pride has passed, and I see nothing to be proud of save the faithful conduct of those who followed me. While painfully smarting under the cowardly and treacherous outrage of the day before, they kept themselves under perfect discipline and self-control. I do not believe a word was spoken on our side save by myself and the interpreter.

In Salt Creek Valley, before marching into Fort Leavenworth, the Major made quite a little talk to the troop, recounting the hardships of the campaign and the faithful and

creditable service rendered, cautioning them to remember that they were men capable of heroic acts and not to brutalize themselves with whiskey, but try to keep up the good name they had so well won on the plains, at the same time reminding them that no amount of service rendered would condone future wrong doing; good behavior should be continuous.

Few incidents worthy of note occurred during the winter of 1853 and 1854. The traditional "B" Troop ball came off, routine of drills, etc. Not a man was tried by court martial during the eight months we remained at the post, except by company court. One night at "tattoo," as I was calling the roll I heard the click of a pistol as if being cocked in front of me. It was quite dark, but standing close to a man I could recognize him. I stopped in the midst of the roll call, stepped forward to where I thought I heard the noise, reached over to the rear rank, seized a man, jerked him out in front of the troop and caught his right hand in his pocket holding a cocked pistol, which I took from him. All was done so quickly that hardly any one realized what was going on. Several seized the man, and I was obliged to protect him. I sent him to my orderly room with Sergeant Peel, finished the roll call and dismissed the troop after cautioning the men not to allow the incident to create any excitement, but all go to bed as usual. In the orderly room the man claimed that he bought the pistol (Derringer) to shoot rats with and had no definite object in cocking it at that time. He was pretty drunk, or pretended to be—an all around bad man, who had done an unusual share of extra duty for punishment. He had been a good while in the army, and had the reputation of having murdered a comrade during the Mexican War. I let him go and gave him his pistol the next day, at the same time telling him that I believed him to be at heart a cowardly murderer. I had no doubt but that he intended to shoot me as I passed him on the way to my quarters, which I would do as soon as I dismissed the troop. He had braced up with whiskey for the act and rather overdid it. I could not prove that he intended to

murder me, and if I sent him to the guard house the verdict would have been that I was afraid of him.

I may as well dispose of this man here. He would have deserted, but was anxious to go to New Mexico, where he had served before, and where the troop and regimental headquarters were now under orders to go. And from the happening of the incident above related he was silent, sullen and on his good behavior, having little companionship in the troop. It leaked out that in his drunken moods he had said he would desert when he got to New Mexico, accompanied with many threats. He never again gave me any trouble, but I was keenly on the lookout for him always.

When I left the troop Corporal Ferguson was made first sergeant. He joined the year before I did and reënlisted a year before my time expired. He was a remarkable fine man, an Irishman by birth, had been clerk at regimental headquarters a good deal and was familiar with all company and regimental papers. Up to within a year he had never cared to serve as a noncommissioned officer. He had been made corporal once before, but resigned. He was a fine horseman, an excellent shot, a superior drill and all-around athlete; a man who would attract attention anywhere. Not much given to words, he held a quiet control of all around him without an effort. The last time he was made corporal was about a year before my discharge, through my influence, and I held up to him the fact that Sergeants Cuddy, Cook, Drummond and others would not reënlist, Peel would not accept first sergeant, and the timber for that place in the troop was scarce, and I had no doubt but that he would be appointed if he would take interest enough to accept it. And he did take interest, and showed so plainly his superiority that the appointment came to him almost as a matter of course. The troop and its commander knew that it was my wish, all became educated up to the idea and expected it. And so when I was furloughed I left him acting first sergeant.

One night after "tattoo" roll call the man of the pistol above referred to plunged a knife into Ferguson's heart, killing him instantly. By great effort the murderer was

saved from being mobbed by the troop; was tried by civil court and sentenced to hang. I have refrained from mentioning the names of men of whom I had to speak in complimentary terms, for the reason that most men have family relations and friends, and to mention them in a way to leave a stain upon their character might be unjust and is altogether unnecessary, and most men who have come under my observation in the army and on campaigns pulled out in fair shape and led good lives, many of them raising families afterwards. But this murderer had no friends on earth that his comrades ever heard of, and sure I am that he had no family near or remote to weep over his crimes. His name was Jackson, and it is but just to his comrades that no mistakes be made in the name.

Sergeants Cuddy, Cook and Drummond were discharged towards the last of the year 1853, and new noncommissioned officers took their places. All three were employed by the quartermaster, and the following spring Cook and Cuddy went with Colonel Steptoe's command, the former as wagon-master and the latter in charge of strings of lead horses to Salt Lake the first year (1854), wintering there and going through to California the following season.

When Walker went on his filibustering expedition to Nicaragua, Cook served as a captain in his command, escaped when Walker was executed, came back to San Francisco and died in poverty. He was a native of Nova Scotia, had been a sailor, and I never knew a stauncher, braver man.

Cuddy was a shrewd man, with money-making tendencies, dropped into the cattle ranch business in California, married a Spanish woman with large Spanish grant, cattle and horses, and the last I heard of him was raising a good family.

Russell, O'Meara, McDonald, Bustwick and others were also discharged and went their various ways—Russell to setting type on the *Missouri Republican*; Bustwick, the farrier, married a wife and farm in Clinton County, Missouri, and was killed at Vicksburg in 1862, while a major in the Confederate army. O'Meara declared he had money enough to take him back to the "Old Dart," and he was going there. I will have occasion to mention McDonald later.

Recruits came from Carlisle before the close of navigation on the Missouri.

The Major applied for and was given authority to purchase twenty-five horses for his troop, subject to his own inspection, and made an arrangement with a Mr. Calvert, of Weston, to furnish them. Two or three times at evening stables the Major pointed out to Mr. Calvert the kind of horses he wanted, the models that suited him best, all to be sorrels of solid color—chestnut or red sorrels would do, but no light colored ones, no white noses—white feet not absolutely barred, but unless exceptionally sound would be rejected. Sound feet, flat, sinewy legs, sound hocks and knees, arms and quarters well muscled, short, sinewy back, high withers, rangy neck, bony head, bold eye—no “hog eyes”—fine ear, deep chest, plenty of room to carry his forage, five to seven years old, fifteen to sixteen hands, preferably fifteen and a half, all natural trotters and well broken to saddle—about filled the Major's idea, reserving the right to reject any of them for any reason satisfactory to himself. The quartermaster paid for the horses on the Major's order. They came in fine shape, were put in our stables, and thoroughly tried before being received. They were a fine lot and the deal satisfactory all around. The old and least serviceable of the troop horses were turned over to the quartermaster to make room for the new ones, and mine was one of them. I saw him sold at auction to a Missouri farmer for \$50.00 and requested him to see that the horse was well cared for, which he promised to do, told me where he lived, and invited me to see him, which I did two years later, dined with him and told him and his wife the horse's history. His wife was riding him in her visits about the neighborhood, and she declared that he should never do any other kind of work. In those days everybody rode horseback. A few wealthy people had old-fashioned, roomy carriages for use on special occasions, but every man and woman, boy and girl, generally rode horseback.

I had the choice of the new lot of horses, and chose a deep chestnut, without a white spot, sixteen hands, fine from ear to hoof, a little nervous, but had not been spoiled, and soon

became a great pet. And now came the task of adjusting this fine lot of horses so as to make the best use of them. It was an ironclad rule that every man must be gentle with his horse. Abusing a horse was the unpardonable sin. Peevishness, kicking, jerking, swearing at, unnecessary spurring or violence of any kind would not be permitted to go unpunished, and noncommissioned officers were sure to report any infraction of the rule. Everything must be done for the comfort of the horse. The noncommissioned officers who wanted to change old horses for new did so, and then came the privates with the least serviceable horses. If, after assignment, a horse was found unsuited to the man or the man to the horse a change was made, whether the man liked it or not, be he noncommissioned officer or private, and from first to last, whatever would add to the efficiency of the troop was done, whether in drilling horses or men. Within five miles of the flagstaff west of the river there was not a nook or corner that we did not drill over, giving strict attention to the skirmish drill.

I have heretofore not mentioned the manner of feeding our horses; they were always watered before feeding. Prairie hay was used—there was no other in the country at that time—and *there was no better "roughness" for horses*. Ear corn was the kind of grain always used in garrison. One can easily see whether corn on the cob is sound or unsound. Shelled corn might be musty or some bad corn mixed with it and none but an expert could tell, while any man would know a sound ear of corn; and more than that, horses do not eat ear corn so fast; they like to bite it from the cob—masticate, relish and digest it better. Of course on the plains one must use shelled corn, but in garrison, in a corn growing country, there is no feed equal to ear corn and prairie hay. I know that now there is a great habit of feeding oats to cavalry horses; farmers, teamsters and livery men did that in the Northern States when I was a boy; it was the best feed they had and oats were nearly always well cured and free from must and dust, and they did not raise corn as they do in the West. Here oats do not do as well as in New England or Canada, are not so easily cured, and are

often both musty and dusty, and as a rule chaffy and light, with little nutriment compared to Northern oats. Corn is the cleanest and best feed; there is nothing equal to it for strengthening or fattening man or beast. Barley and wheat are good feed where corn is not raised, but where it grows in abundance there is nothing equal to corn; for man, for horses and mules, for cattle, for hogs, for fowls, it is the king of products to make muscle and fat. The Southern planters fed corn and bacon to the negroes because it made them strong and healthy; they fed corn to their plantation mules for the same reason. At the salt mines in the Island of Bonair the strongest negro men and women I ever saw were allowed a bushel of corn a month and no other food except some fish that they could catch occasionally. They could parch the corn, grind it between two rocks, or eat it without cooking—no mills to grind it with; 'twas corn that made them big and strong. Probably this has nothing to do with cavalry horses, but all the same I have never seen better or more enduring ones than were in "B" Troop, and *prairie hay, corn and good care* made them what they were. The nutriment in prairie hay does not equal that in timothy, clover or alfalfa when well cured, but it is much easier cured; the nutriment is in sound ear corn.

As heretofore stated, the man who was the instigator of the fire in Cuddy's orderly room deserted, and with his wife stayed about Weston. His occupation was "recruiting deserters;" that is, he would find men with money after pay day, persuade them to desert if he could, and often robbed them. One Sunday I tried to capture him but he escaped on horseback while I was hunting him. I found the shanty where he lived with an ill-assorted set of vagabonds in a little corn-field, and represented to Major Chilton that a dozen men could surround it and effect his arrest. The next Sunday Lieutenant Hastings and a dozen men, including Sergeant Peel, went over to Weston, surrounded the house, half the men dismounting and hunting through corn shocks. Out of a shock ran the man into the house, with Peel after him. Peel searched thoroughly in vain. A man and half a dozen women, including the deserter's wife, were sitting at

a table apparently in the act of commencing to eat dinner. 'Twas when big hoop skirts were worn, and being a small man Peel felt sure that he was under his wife's skirts and a blanket thrown round her lap and feet, told her so, and declared that he would have him if he had to go under her skirts. At this juncture Lieutenant Hastings rode up and called Peel out, told him he had no right to enter and hunt through a man's house without a search warrant, which he did not have, and now that he had laid himself liable to arrest they must mount and get across the river, which they did. It was understood that an indictment was found against Peel, and after that he kept away from Weston. A month later the man gave himself up, a consumptive wreck, and died soon after. He confessed that he was under his wife's skirts when Peel was after him.

In March, 1854, I was made a Mason in the Weston lodge and took the first three degrees. I have seen something of masonic lodges since that time, but have never seen a finer set of men or brighter Masons than that lodge contained. "Old Jimmy" Miller was the secretary and "father" of the lodge, and Perry Wallingford conferred the degrees in a manner that the "novice" could never forget. One night every week, when it was convenient for me to be absent, I spent in Weston and attended the lodge. I asked the captain's permission to ride over to Weston in the evening and back in the morning, and it was cheerfully given.

And now the time was approaching for the annual campaign. Headquarters, staff and band and "B" and "D" Troops were ordered to New Mexico and would leave about the first of July. Brydon reënlisted and was transferred to the band. He was getting old, and settled down to the fact that the best way to provide for old age was to go to the Soldiers' Home in Washington. The government had just commenced to collect 12½ cents per month from each soldier for its support. While regretting to part with him I encouraged him to take the step, for, old and out of the army, he would be helpless. He was the only man who had shared my tent for the last two years, except on a few emergencies, and had been my constant friend since we joined the troop.

Towards the last of May "D" Troop, Captain John Adams, came from Fort Snelling by steamboat and camped on the "blue grass," a little southwest of where is now "Merritt" Lake, and the month of June was a busy one for every one preparing for a move that admitted of no return for probably some years.

[*To be Continued.*]



THE JEFFERSON GUARD AT THE LOUISIANA PURCHASE EXPOSITION.

IN the personnel of the officers' staff of the Jefferson Guard, the military force of the St. Louis World's Fair, corresponding to the Columbian Guard at Chicago in 1893, the cavalry regiments of the United States army are well represented. As the Guard is purely an infantry body, this circumstance, although entirely accidental, is an additional proof of the fact that the American cavalry is susceptible of being used in any place.

From an organization of one officer and six men, the Guard has grown to its present strength of approximately six hundred men, with a staff of fifteen officers, the latter all members of the United States army.

Major, now Lieutenant Colonel, E. A. Godwin, of the Ninth Cavalry, was the first commandant of the Jefferson Guard, having been detailed by the War Department for that duty, and having taken charge in February, 1902. In July of the same year, six men were actually placed on duty at the Fair Grounds, forming the nucleus of the present organization. This force was increased, from time to time, as the necessities of the service demanded.

The first considerable increase of strength was at the time of the dedication of the Louisiana Purchase Exposition grounds and buildings, April 30, May 1 and 2, 1903. At this time the Guard consisted of one hundred men and four officers, the latter being Lieutenant Colonel E. A. Godwin, Ninth Cavalry, commandant; Lieutenants Heintzelman, Sixth Cavalry; Shields, Twelfth Infantry, and Clark, Fifth Infantry.

Major A. G. Hammond, Third Cavalry, was detailed for duty, as assistant commandant, and reported on August 18,

1902. In February, 1904, Colonel Godwin was, at his own request, relieved as commandant, and Lieutenant Colonel H. P. Kingsbury, Eighth Cavalry, was detailed to succeed him, as commandant of the Guard. Lieutenant Heintzelman was relieved, at his own request, in September, 1903, and Lieutenant Shields, in January, 1904, to enable him to proceed with his regiment, the Twelfth Infantry, to the Philippine Islands.

With the approach of the opening day of the Exposition, steps were taken to increase the Guard, with the result that, on that day, April 30th, the strength of the Guard was 520 men.

The general affairs of the Guard, in so far as they relate to the financial and other strictly non-military details, are in the hands of the Committee on Police, a standing committee of the Exposition Company, whose membership is as follows: Harrison I. Drummond, chairman; C. H. Turner, vice-chairman; J. J. Wertheimer, W. C. Steigers and Colonel J. G. Butler. Mr. E. I. Prickett, who was connected with the organization before the appointment of a commandant, or the recruiting of the men, is secretary of the above committee.

The following is the roster of the officers now on duty with the Guard:

Lieutenant Colonel H. P. Kingsbury, Eighth Cavalry, commandant.

Major A. G. Hammond, Third Cavalry, assistant commandant.

Captain Arthur Thayer, Third Cavalry, assistant commandant.

Captain W. E. Welsh, Thirtieth Infantry.

Captain George Vidmer, Eleventh Cavalry.

Captain C. H. Conrad, jr., Third Cavalry.

Captain G. H. Shelton, Eleventh Infantry.

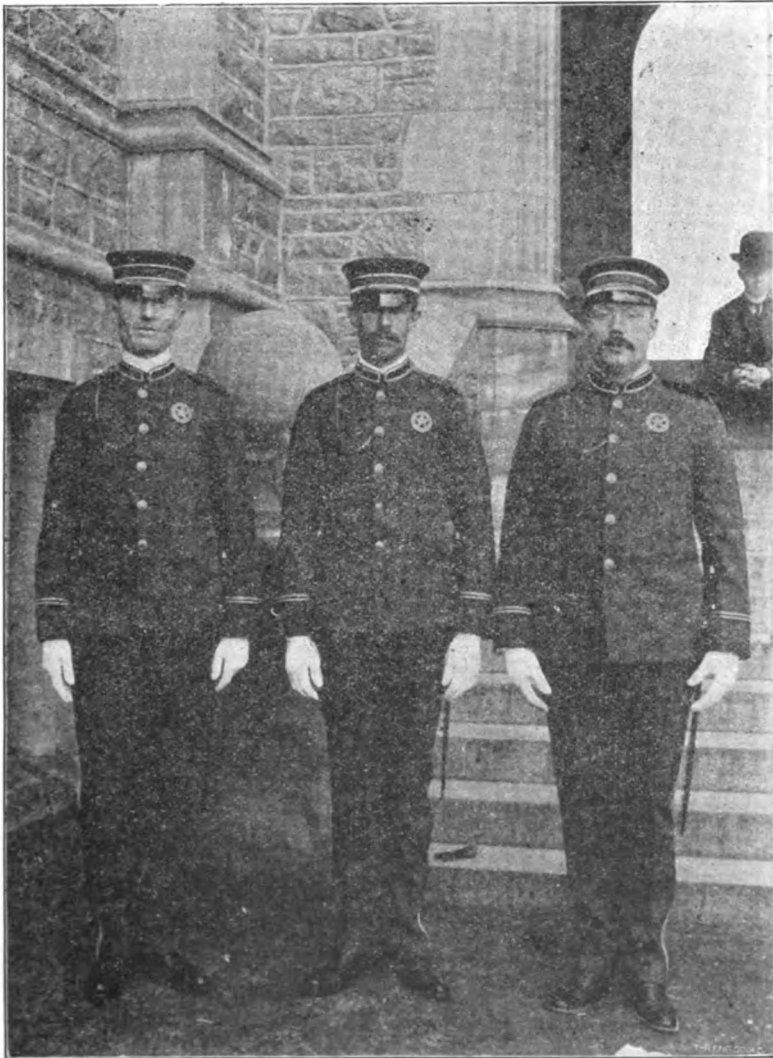
Captain R. E. Ingram, Tenth Infantry.

Captain Campbell King, First Infantry.

First Lieutenant C. B. Clark, Fifth Infantry.

First Lieutenant G. Arthur Hadsell, Nineteenth Infantry.

First Lieutenant A. A. Parker, Twenty-fourth Infantry.



THE JEFFERSON GUARD.

First Lieutenant W. O. Reed, Sixth Cavalry.

First Lieutenant J. M. Loud, Twenty-eighth Infantry.

First Lieutenant A. O. Seaman, Fifteenth Infantry.

The commandant of the Guard has full power, subject to the president of the Exposition Company, over the organization, government, discipline and appointment to the Guard, the custody and control of all property, equipments and records belonging to the Guard.

The staff consists, besides the commandant, of two assistant commandants, an adjutant and a quartermaster. The first has already been named. The assistant commandants are Major Hammond and Captain Thayer. The adjutant is Captain C. H. Conrad, jr., Third Cavalry, and the quartermaster is First Lieutenant C. B. Clark, Fifth Infantry. Besides these officers, the administrative officers of the Guard consist of a sergeant major and a quartermaster sergeant, with the requisite clerical force.

The force is at present divided into five companies, each with its captain and lieutenant, its first sergeant and sergeants in the proportion of one to every twenty privates. As the Guard is increased, should necessity arise, new companies will be formed.

A large per cent. of the men on the Guard are ex-soldiers of the regular army, and this fact is evident in the bearing and deportment of the men. The qualifications necessary to be possessed by a candidate for a place on this force are, that he must be at the time of his appointment a citizen of the United States, of good moral character, temperate habits, and in perfect physical condition, able to read and write the English language, between the ages of twenty-one and forty years, at least five feet eight inches in height, and between 145 and 180 pounds in weight. Every applicant is required to present letters from at least two reputable citizens, testifying to his sobriety and good character. He is required to undergo a physical examination, and if accepted must be vaccinated. If the applicant has been in the military service he is required to present his discharge certificate.

There is no fixed term of service for the men. All the Guards are required to remain constantly on the grounds,

unless absent by permission. The pay of the men is \$50.00 per month, and they board themselves. If a Guard remains in the service for six months after receiving his uniform, the money deducted to pay for the same is credited to him, and becomes available to buy a new one. Otherwise after it has been turned in, he is charged a reasonable amount for the time that he has used it. Quarters, bedding, light, heat and water are furnished by the Exposition Company.

While the organization is a semi military one, there is a strictly military tone in the Guard, and the traditions of the army and the customs of the service are preserved whenever possible. All those needing it are given as much military drill as time admits. All are thoroughly drilled in the handling and care of fire apparatus, such as Babcock extinguishers, hand grenades, etc., and the making of couplings and attaching hose to hydrants, as a large part of their duty, in addition to the preservation of peace and order on the Fair site, consists in the prevention of fire. Pursuant to this idea, they are required, immediately on being assigned a post, to familiarize themselves with the location of the fire alarm boxes, water plugs, chemical extinguishers and hose, not only in the buildings in which they are on duty, but also in and about adjacent buildings, and everywhere on the grounds.

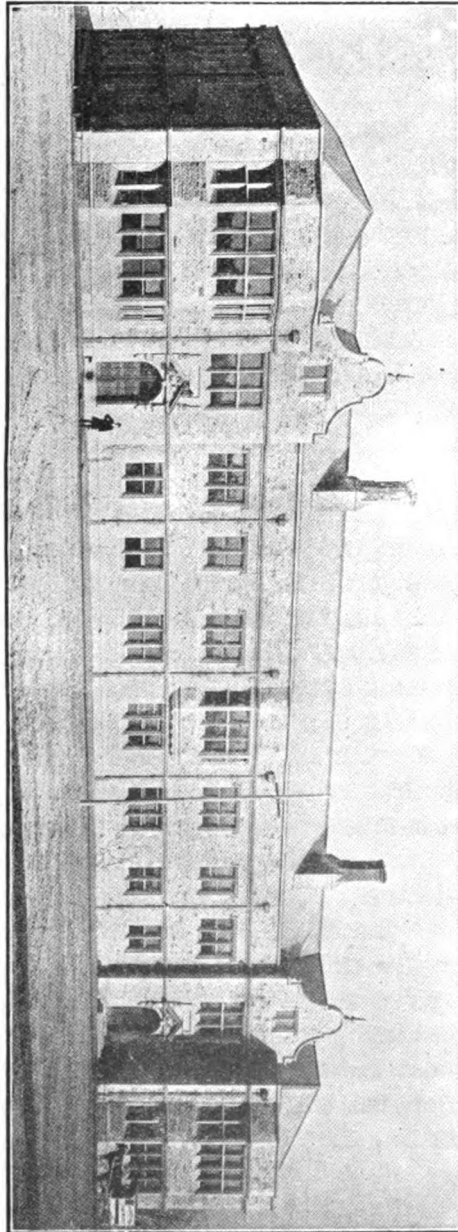
Every member of the Guard is expected to perform his duty in a quiet and orderly manner, courtesy and civility being especially emphasized. They are enjoined to treat all visitors with uniform respect and courtesy, answering all questions as far as possible, but refraining from entering into any extended conversation, or leaving their posts.

In case of accident or any unusual occurrence the Guard first learning of it is required to make an immediate investigation of the matter, obtaining the names and addresses of all the parties concerned, for a full report of the matter, without delay.

The uniform adopted for the Guard is one which is calculated to give them a neat and soldierly appearance. It is of light blue, with the colors of the Louisiana Purchase Exposition. The cap is identical in shape with the present army standard. It has a flat gold band around the crown,

and two rows of one-eighth inch soutache braid, in the red, white, blue and yellow colors of the World's Fair, seven-eighths of an inch apart. The words "Jefferson Guard" are embroidered in front, on blue cloth, between the two rows of soutache. The coat is of sixteen-ounce material, quarter lined, with one inside breast pocket. The collar is one and one-half inches high, of red cloth, braided all around with three rows of soutache, in colors mentioned above, the rows being nicely separated to reduce the width of the red stripe in the center to a little over half an inch. The coat has shoulder straps, with the monogram "J. G." embroidered in red upon it. The sleeves have two rows of white, blue and yellow soutache, running straight around at the cuffs, with a one-quarter inch red stripe in the center. There are three small buttons on each sleeve, and five large ones down the front of the coat. All buttons are of brass and bear the monogram "J. G." The coat is piped with red and has a slit at the side to accommodate the hilt of the short sword, which the Guard wears while on duty, the belt being worn beneath the coat. The trousers are of the same color as the coat, and have stripes down the sides exactly similar to those worn on the sleeve. The Guard is also provided with a khaki uniform, similar in general shape and design, to that worn by enlisted men in the regular army. This is worn at night to enable them to make one blue uniform last for the entire season. The sword worn by the Guard is a short one, similar to that worn by Continental gens d'armes. It is carried in a polished black leather scabbard, brass tipped, and the cross-hilt bears the letters "J. G." A whistle, attached to a nickel chain, is also worn by the Guard, and used to summon assistance, when necessary.

The members of the Guard are sworn in as private watchmen, under the laws of the State of Missouri, to enable them to make the necessary legal arrests of all offenders against the law, or the regulations of the Exposition Company.



JEFFERSON GUARD BARRACKS.

CAMPAIGN OF PLEVNA—TURKO-RUSSIAN WAR
1877-1878.

THE curriculum of the January to June course of the General Service and Staff College at Fort Leavenworth, Kansas, included a series of lectures on the subject of strategy. These lectures, the subjects of which were selected by Colonel A. L. Wagner, Adjutant General's Department, were intended to illustrate some of the principles of strategy. The course was an elementary one, and for lack of time had to be so. The method pursued in this elementary study was one that gave good results, and it is now the tendency to make the next year's course in other subjects taught at the College similar to the strategy course.

For the lectures, which were delivered by the instructors, the entire student class (ninety-one officers) were assembled in the lecture room. A printed pamphlet containing a synopsis of the campaign was issued to each student prior to the lecture. A reading of the pamphlet assured a certain familiarity with the campaign, and made the lecture more interesting. The lecture, which lasted about one hour, went over the entire campaign, laying especial stress on the principle or principles of strategy to be illustrated by it.

After the lecture the different sections into which the student class is divided assembled for recitations on this campaign. Besides the printed pamphlet and the map, each student was given a set of questions on the campaign, answers to these being found in the pamphlet. During the recitations or quizzes these questions were propounded to the students and their answers corrected. At the end of the course a written examination was held to determine the relative proficiency of the students in these subjects. Three questions were selected from each of the ten campaigns in the course.

The following short synopsis of the campaign of Plevna

gives an idea of the pamphlets issued. For some of the campaigns this matter was taken from Hamley's *Operations of War*, but a few campaigns in the course are not treated in Hamley, and the synopsis in those cases were written by the instructors.

The campaign of Plevna is here published to show the character of the work done. It was also selected on account of the interest attaching to it by reason of the present war in which Russia is engaged.

The synopsis was written by Major W. W. Wotherspoon, Sixth Infantry, instructor in the Department of Tactics, General Service and Staff College.

The material for this lecture is taken largely from General Francis V. Greene's "Russian Campaign in Turkey, 1877-78," a standard work on that campaign.

"On the 24th of April, 1877, the Emperor of Russia promulgated at Kishineff his manifesto, reciting his warm interest in the welfare of the oppressed Christian races in Turkey and his desire to ameliorate their condition, which desire was shared by the whole of the Russian people, and stating that for two years—ever since the disturbances in Bosnia—he had constantly striven, in concert with the other European powers, by peaceful negotiations, to induce the Porte to introduce those reforms to which it was solemnly bound by previous engagements, and by which alone the Christians in Turkey could be protected from local exaction and extortion; that these negotiations had all failed through the obstinacy of the Porte. And now all peaceful methods being exhausted, the moment had arrived for him to act independently and impose his will on the Turks by force, and therefore the order had been given to his army to cross the Turkish frontier."

The "Army of the South," under the command of the Grand Duke Nicholas, which was ordered to cross the frontier on April 24th, consisted of four corps stationed near Kishineff, and two rifle brigades. A few days later three more corps, the Fourth, Thirteenth and Fourteenth, which had been mobilized from 400 to 800 miles back from the frontier, were

placed under his orders, and moved forward by rail to the frontier. These seven corps and two rifle brigades, amounting in round numbers to 200,000 men and 800 guns, were deemed a sufficiently strong force with which to undertake the invasion of Turkey, notwithstanding the probability that the usual casualties from sickness, detachments, etc., would reduce it by ten per cent., or to 180,000 men, by the time it could cross the Danube River.

The exact number of troops which Turkey had under arms in Europe at the outbreak of the war cannot be stated. In round numbers she had 250,000 men and 450 guns, all regulars, and stationed as follows :

In her Western European provinces.....	85,000
On the Upper Danube at Widdin.....	60,000
In the fortresses Rustchuck, Silistria, Varna, Shumla.....	50,000
Detachments at minor points along the Danube.....	15,000
South of the Balkan Mountains at Sophia, Philippopolis, Adrianople and Constantinople.....	40,000
Total.....	250,000

Of these, 165,000 were immediately available for operations in Bulgaria, that is, that province of Turkey lying between the River Danube and the Balkan Mountains, where the first encounters must take place. By drawing in detachments and by recruiting, Turkey managed to maintain her strength in the theatre of war until the fall of Plevna at about 250,000 men.

The discrepancy in the matter of guns, 800 Russians to 450 Turkish, was made up for in a degree by the superiority of the Turkish over the Russian; the former had Krupp steel breech-loaders against the inferior bronze guns of the Russians. The Turks also had an advantage in that the small arms of their army were superior to those of the Russians.

THEATRE OF OPERATIONS.

The theatre of war, in which military operations were to be undertaken, lay between the Russian boundary on the north, the Sea of Marmora on the south, the Black Sea on the east, and the spurs of the Carpathian and Balkan Mountains on the east, where the fortress of Widden stands at the

bend of the Danube. So much of this theatre of war as lies north of the River Danube and south of an east and west line through Philippopolis, can be dismissed with a few words. Roumania, which lies between the Russian boundary and the Danube was friendly to Russia; its territory slopes gently from the Carpathian Mountains southward to the banks of the Danube, where they are as a rule low and flat. No fighting took place in this area.

From Philippopolis, south, runs the valley of the Maritza River, leading by Hermanli and Adrianople to Constantinople, bounded on the east by a range of hills and the Black Sea, and on the west by a range of mountains; as the war in this area was subsequent to the fall of Plevna, we may omit a more minute detail of it, after noting the railroads which were used to bring supplies and reinforcements to the Turks.

Confining the description then to the area lying between these two zones it is noted that the Danube River bounds it on the north; this river is deep and swift, cut up into many channels by islands, and no where passable except by bridges or ferries. The bridges were at Widdin, Nikoplis, Sistova, Rustchuck, Silistria and Galatz. From these places fair roads ran southwards to the passes in the Balkan Mountains, and were connected by roads running east and west. The southern bank of the Danube is high and steep from the spurs of the Balkan Mountains which run down to it, thus affording strong positions facing the river. Between the Danube and the Balkan Mountains the country is rolling, but under cultivation for the most part.

The Balkan Mountains cross the theatre from east to west in the southern part, turning north toward Widdin near Sophia. These mountains are high and rugged, their crests being from 3,500 to 5,000 feet above sea level, but are passable at certain points by good wagon roads, and at others by trails. The principal passes are: Sophia-Orkani towards Plevna; Shipka Pass from Eski-Zagra by Kazalink to Gabrova and Tirnova; Yamboli-Kazan to Osman Bazar and Aidos to Shumla. These passes reach the heads of valleys in which certain rivers rising in the Balkans flow

north into the Danube as follows: The pass from Sophia, to the valleys of the Isker and Vid, the Shipka Pass, to the valley of the Yantra; the pass from Yamboli by Kazan, to the valley of the Lom; the pass from Aidos to Shumla leads to the railroad connecting Varna on the Black Sea with Rustchuck. These are the principal passes through the Balkans; others more difficult lie between. Railroad communications are shown on the map. Russia received her supplies through Bucharist, Turkey from Constantinople by Yamboli, Hermanli and Philippopolis, and by sea to Varna, and thence by rail to Shumla and Rustchuck.

The theatre represents a great basin bounded on the north by the Danube, behind which Russia could prepare for her advance, and on the south by a chain of rugged and difficult mountains, in the passes of which the Turks might bar the way to the south and their capital, Constantinople.

RUSSIAN PLAN OF CAMPAIGN.

Had Russia controlled the Black Sea, the natural plan of campaign would have been to advance by the way of Galatz, near the mouth of the Danube, Galatz being the terminus of the railroad from the north, then to march its army near the coast, using the seaports as bases of supply, capturing the Turkish fortress at Varna, the only one on the coast, and masking the other fortresses she could have crossed the Balkans where the passes were lowest and thus, basing herself on the Black Sea, have reached Adrianople. Such a course was not, however, possible, as Turkey controlled the sea, and it would have been impossible to have protected her long line of communications with the Turks holding the sea on the east, and a line of fortresses on the west of the line.

The plan therefore adopted was to seize the railroad bridge at Galatz, thus securing the line of railroad, to cross a corps at that point to protect their rear against an attack from the Dobrudja, and to march the bulk of their army through Roumania and across the Danube between Nikopolis and Rustchuck, then to post a strong force along the

line of the River Lom to protect that flank from operations from the east, another strong force along the line of the River Vid, or Esker, to act against the enemy at Widdin, and the two flanks being thus protected, to march south between these two walls towards Adrianople across the central passes of the Balkans.

Had the Russians opened the campaign with 375,000 men, the number found necessary before the close of the war, instead of with 200,000, this plan might have been carried out, but with the insufficient force at hand, having crossed the Danube, posted its two flanking forces and seized a pass across the Balkans, there were no troops left to send south of that mountain chain against Adrianople, and by the time sufficient force had been obtained affairs had taken a different turn.

Greene divides the campaign into three stages :

1st. Ten weeks, from April 24th to July 3d, occupied by the concentration of the army in Roumania, the passage of the Danube, and the establishment of the army on the south bank.

2d. Twenty-three weeks, July 4th to December 10th, the operations in Bulgaria.

3d. Twelve weeks, December 11th to March 3d, the passage of the Balkans and march on Constantinople.

The campaign of Plevna belongs in the second period, its position on the flank of the Russian advance was the cause of the long delay of twenty-three weeks, which comprises that period, and it was during that period that the events took place which are under consideration.

The first period of the war, from April 24th to July 3d, was occupied as stated by the passage of the army through Roumania, and its crossing the Danube. This was effected by marching the troops over the excellent roads and leaving the railroads free to transport the guns and munitions of war. On the 24th of May, one month after passing the frontier of Roumania, the army was concentrated opposite that portion of the Danube selected for the crossing, the bulk of it, two and a half corps near Bucharist, with half a corps on its right flank near Slatina, and a strong cavalry force with infantry

supports along the river from Nikopolis to Silistria. The date of passage had been set for June 6th, but a heavy rise of the river and delays in the arrival of bridge material, caused a postponement until the last days of June and first few days of July. The crossing of the Danube was effected with but slight opposition, notwithstanding the advantageous positions of the Turkish army on its south bank, the advance guard under Gourko July 3d, the Thirteenth Corps on the 3d and 4th, the Twelfth, Ninth, Eleventh and Fourth Corps from July 5th to 20th. The Thirteenth Corps had been pushed across the river in advance to hold the southern banks, and was in position during the early part of the above movement.

In accordance with the general plan previously explained, Gourko with the advance guard was to push forward rapidly to the Balkans by the main road passing through Tirnova, the Eighth Corps was to follow the same road, the Thirteenth Corps followed by the Twelfth was to take the line of the River Yantra, the Ninth Corps was to attack Nikopolis, and the line of the Vid on the right, and the Eleventh and Fourth Corps were to be held in reserve.

On the 5th of July the Russians captured the town of Beila on the Yantra, on the 7th Gourko captured the town of Tirnova. The possession of these two towns practically secured the line of the Yantra, and the Twelfth and Thirteenth Corps, combined into the Russian left wing, gradually moved forward to the River Lom, thus carrying out the original plan on the Russian left.

The force under General Gourko, acting in the center, consisted of 8,000 infantry, 4,000 cavalry and thirty-two guns. Following out the general plan, he was to push south and open a pass through the Balkans. After the capture of Tirnova July 7th, four days were spent by the general gathering information about the enemy and the mountain passes. He learned that there were no troops in any of the passes except the main one at Shipka, which was held by about 3,000 Turks with a few guns and a small force of irregular cavalry. Upon the information gathered, Gourko determined to leave all his baggage at Tirnova, to march his force by a blind

trail over the mountains between the Elena and Travana Passes, to turn to the west on issuing from the mountains and to attack Kazanlyk and Shipka Pass from the south. He planned this attack to take place on the 17th, on which date part of the Eighth Corps, marching south from Tirnova, was to attack the pass from the north. On the night of the 12th Gourko was eighteen miles south of Tirnova; on the 13th he crossed the divide, and at 2 A. M. of the 14th surprised the Turkish garrison (300) at Hainkioi; on the 15th he rested at Hainkioi. On July 16th Gourko left Hainkioi and began his march towards Shipka, intending to reach Kazanlyk that afternoon and to attack Shipka the next morning, according to the plan agreed upon. The Turks were, however, found ten miles in front of Kazanlyk. They were not driven from their position until so late that Gourko was compelled to camp. On the morning of the 17th Gourko pushed forward again, met the Turks five miles out of Kazanlyk, but did not capture the town until noon. In this way it happened that he could not make the attack on Shipka on the 17th. The attack was, however, made from the north. This attack met with but partial success. On the 18th, Gourko planned a simultaneous attack from the north and south, but his note failing to reach the northern force, he attacked alone and failed. On the morning of the 19th both detachments prepared to renew the attack, but the Turks had evacuated their position, and on that date the pass was in the hands of the Russians.

Thus by the 19th of July two parts of the Russian plan had been successfully carried through. Their left was securely guarded by the Twelfth and Thirteenth Corps, along the line of the Lom, and a pass over the Balkans opposite their center had been secured.

Before detailing the movements of the Russians' right wing, the movements of the Turks must be referred to.

The passage of the Danube by the Russian army, and the appearance of General Gourko south of the Shipka Pass, produced the most profound effect upon the Turks; intense alarm prevailed in Adrianople and all the territory south of the Balkans. Every effort was made to get together an

army to oppose the Russian march on Adrianople and by great exertions the Turks, by the last week of July, had gathered an army of 50,000 men at the junction of the railroads, near Hermanli (Tirnova). By July 29th, this army, which was commanded by Suliman Pasha, was moving north upon Shipka by way of Yeni Zagra, where it was met by Gourko, and by him delayed for a few days by very skillful movements. By the 5th of August, Suliman had moved his army up to Yeni-Zagra, and Gourko, owing to events north of the Balkans, which prevented his reinforcement, had retired into the Pass of Shipka.

On the Russian left, facing their corps along the Lom was Mehemet Ali with 65,000 men. This force and the garrisons of Rustchuck and Varna held the Russians in check on the east. On the Turkish left the army of Osman Pasha, from 40,000 to 50,000, started its march eastward from Widin towards Plevna during the latter part of June. Nikopolis was already occupied by the Turks with a garrison of from 10,000 to 12,000 men intrenched in its neighborhood.

Turning now to the movements of the Russian right wing, which was charged in the general plan already described with the duty of protecting the right flank of the advance by taking up a position on the Vid or Esker, the first task was its capture of Nikopolis, and the dispersion of the Turkish force in its vicinity. This task fell to the Ninth Corps, under General Krudener, which had crossed the Danube on July 10th. On July 15th the Turkish position was occupied, and on the 16th the garrison surrendered. Meanwhile, the army of Osman Pasha was advancing on Plevna. It was first heard of on the 17th, but the Russians seemed to have no idea of the strength of the force marching on their right flank. On July 20th Krudener attacked the Turkish advance at Plevna with a small part of his force, 6,500 men, and suffered a severe defeat, losing 2,771 men, and nearly two-thirds of the officers. Not yet appreciating the force against them, the Russians on July 30th, made a most determined assault upon Plevna, which was at that date occupied by Osman Pasha's army of 40,000 men, strongly intrenched. The Russian force of 30,000 men attacked in

two columns, not in supporting distance of each other, and was severely defeated with a loss of 169 officers and 7,136 men. The dead were left on the field, and Krudener retired with his corps about ten miles to the vicinity of Porodim. Osman Pasha did not follow up his success, but contented himself with strengthening his lines around Plevna and gathering reinforcements from the south.

The decisive defeat of the Russians at Plevna and the appearance of Suliman Pasha in front of Gourko at Yeni-Zagra with 50,000 men brought the Russian advance to a standstill.

The positions of the opposing armies on this date were as follows:

The Russians occupied a figure nearly elliptical in shape and extending from Nikopolis through Porodim in front of Plevna, Selvi, Gabrova, Shipka, Elena, Cesarevo, Katselevo and the line of the Lom to the Danube near Rustchuck. From Sistova to Shipka Pass the distance by road is about eighty miles; from Poradim to Katselevo the distance is about ninety miles. The six Russian corps occupying this space had lost in killed and wounded about 15,000 men. Their total strength July 30th was probably about 120,000 infantry, 12,000 cavalry and 648 guns.

The Turks were on the exterior of this ellipse and occupied in force three points: Plevna with 50,000 men under Osman Pasha; Yeni-Zagra with 40,000 men under Suliman Pasha, and Rasgrad with 65,000 men under Mehemet Ali. They also had strong detachments at Lovtcha, south of Plevna, and Osman Bazar, south of Rasgrad, as well as in the fortresses Rustchuck, Shumla and Varna. Their total force was about 195,000 men.

All idea of carrying out the original plan of campaign by the Russians had naturally to be abandoned. There was nothing to be done but to leave the troops on the defensive, and quietly await reinforcements. The corps on the line of the Lom and those on the line of the Vid each had an enemy numerically superior in its front, leaving nothing with which to cross the Balkans, except the Eighth Corps which had in its front Suliman Pasha's army of 40,000 men.

The great mistake of starting the campaign with too small a force now became apparent, and Russia took steps to meet the situation as follows: On August 3d the Emperor directed the mobilization of the Guard, the Grenadiers, and two divisions of the line; two other divisions of the line had been previously mobilized and the first ban of the militia had been called out. The effect of these measures was to call out 120,000 men for service at the front, and 220,000 more to replace losses and do ordinary duty; these troops arrived on the Danube as follows: Two divisions in August, the Guard and one division in September, and the Grenadiers and one division in October. But as only a small part of this force could be expected during the early weeks of August, the Emperor appealed to the Prince of Roumania to put his army of 32,000 infantry, 5,000 cavalry, and eighty-four guns in the field. This army had been mobilized in May, and on receipt of the appeal from the Emperor it was promptly ordered to cross the Danube.

While these measures were being taken to strengthen the Russian army it was ordered to restrict itself to the defensive, holding the positions it then occupied.

This was the time when the Turks should have taken the offensive and by rapid concentration on their right have struck a blow at the Russian line of communications. Owing to divided councils no concerted action took place. Sulliman Pasha began an attack upon Shipka Pass in his front August 21st, and kept it up for nearly four months, without other results than great loss to his army. Osman Pasha on August 31st made a weak attempt from Plevna, which resulted in nothing. Mehemet Ali attacked the Russian left wing on the Lom August 30th and drove it back to the Yantra, but in a few days retired to his old position, and the Russians resumed their position on the Lom.

Towards the end of August the Russian right wing had been reinforced by two divisions and the Roumanian army, bringing the total strength of that wing to about 105,000 men. The greater part of this force was on the north and east of Plevna, the remainder between Selvi and Lovtcha. On September 3d the Russians with 20,000 men attacked the

Turkish force of 15,000 men at Lovtcha, defeating it and cutting it to pieces. From this date the Russians held Lovtcha, and from thence extended their lines towards the Esker in the attempt to cut Osman Pasha from supplies and reinforcements which were arriving from Sophia and Widdin. On September 7th the Russians opened the great artillery attack upon Plevna with 442 guns, which continued until after the 15th. On September 11th was made the great assault upon the Turkish redouts around Plevna which though successful in part must be accounted a failure. It was the last great attempt to capture the town by force, and from that date the Russians waited for the turning movement, which was to shut the Turks off from supplies from the south and west, by depriving their army in Plevna, which had by now been reinforced to 55,000 men, of its communications with Sophia and Widdin.

The investment of Plevna did not become effective until General Gourko assumed command of the corps of investment on the west bank of the Vid during October. The Turks held four strongly fortified positions, Dolni-Dubnik, Gorni-Dubnik, Telis and Radomirtza along the Sophia Road protecting their line of communication. To General Gourko was assigned the task of capturing these positions and closing the Sophia Road. On October 24th he assaulted the works at Gorni-Dubnik and took them. After two assaults Telis surrendered October 28th. By November 1st he was ready to attack Dolni-Dubnik, but without awaiting the attack the Turks abandoned their works and withdrew. By November 12th all of these fortified positions had been taken, the investment of Plevna was complete and General Gourko free to operate towards the south and west.

After the close investment of Plevna but little fighting took place between the two armies in and around that place. Meanwhile Osman's army was running short of provisions. On November 13th he was summoned to surrender but declined. On December 10th he attempted to cut through the Russian lines and escape, but failing in his effort, with a loss of 6,000 men killed and wounded, surrendered his entire

army, 45,000 men, seventy-seven guns, and enormous quantities of ammunition.

The fall of Plevna closed the second stage of the Russian campaign. For twenty-three weeks Osman Pasha had held the Russians back from the advance south of the Balkans, had caused them to call out an immense increase of force over that with which they had started the campaign, and had caused them the enormous loss of nearly 40,000 men in killed and wounded, thus illustrating the manner in which the advance of an army can be checked by the presence of a hostile force intrenched on the flank of the line of march.

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Reprints and Translations.

EXTRACTS FROM ENGLISH ARMY REGULATIONS
PERTAINING TO THE CAVALRY.

THE First (King's) Dragoon Guards have upon their service roll the following: "Blenheim," "Ramilies," "Oudenarde," "Malplaquet," "Dettingen," "Waterloo," "Sevastopol," "Taku Forts," "Pekin," "South Africa, 1879." Each regiment of the British service has, what are known as the regimental standing orders, and the following extracts are taken from the standing orders of this regiment:

Officers Commanding Squadrons.

10. As regards the distribution of duties, the general principle of training an understudy for every position must underlie all arrangements that are made.

Officers in General.

7. When an officer obtains a leave for a week or more he will leave the key of his quarters with the quartermaster, and inform him how many chargers he is leaving in barracks.

8. If his leave is over three days he will see that his servants, except those that are required to work in the stable, are sent back to their duty.

9. He will inform the adjutant of his address or any change of it.

10. All officers returning from leave are required to make themselves acquainted with the orders issued during their absence.

11. No officer is permitted to take his servant away with him on leave without permission of the commanding officer.

13. No officer on the sick list will appear in the mess, or leave his house or quarters unless recommended by the doctor to do so for exercise, nor will he appear at any entertainments or public places of amusement.

15. Punctuality to the dinner hour must be observed at mess, and all officers must appear as correctly dressed as if on dress parade.

20. No officer will ride a troop horse without permission of the commanding officer, when he must clearly state how often he wants to do so.

Noncommissioned Officers in General.

3. A noncommissioned officer will not exercise the power of placing an inferior under arrest, or confining a man in the guard room, when he is able to refer the case to an officer, but if he has done so at any time he will at once report the case.

10. They are forbidden to have money transactions with any inferior, and if they are found to be running into debt, they will seriously jeopardize their chances for promotion.

Regimental Sergeant Major.

10. He will receive a fee of two guineas from each young officer for instructing him in drill, and will be expected to give them such private instruction as they may require as long as it does not interfere with his other duties.

Regimental Quartermaster Sergeant.

6. He will visit daily the kitchens occupied by the servants of unmarried officers, and see that they are kept clean and tidy. He will also apportion passages and stairs of officers' quarters to servants, and see they are kept clean.

Sergeants.

1. Sergeants are required to know everything about their squads, both men and horses, and in the absence of

their troop leader to take command of the troop to which they belong.

2. They are expected to be thoroughly capable of leading a troop in the field, to have a good knowledge of "pace," and to understand clearly the duties of the commander of a patrol.

6. They are not to walk out with privates.

Privates.

10. If an officer passes a soldier at any time, the latter will, if he has any cap or head dress on, invariably come smartly to attention and salute. If he is one of a party, such party must be called to attention by the senior man present, who will himself salute.

11. All soldiers when walking about the streets of any town will invariably wear both gloves, and if not on duty under arms, will carry a whip or cane.

14. If any wish to improve themselves in or carry on the work of any trade they are acquainted with, they will apply to the quartermaster, who will give them any assistance in his power. All soldiers are reminded that in the service many facilities exist for learning trades, and that they will do well to avail themselves of the chance of thus ensuring their future in civil life.

Noncommissioned Officers on Canteen Duty.

The duties of the canteen corporal are as follows :

2. He will be posted by the regimental orderly sergeant half an hour after reveille, and will not leave the canteen (except for necessary purposes, when he must leave the cashier in charge) till first post sounds.

3. He will report himself at the guard room at watch setting.

4. He will allow no dispute or disturbances to take place in or about the canteen.

5. He will allow no man the worse for liquor to be served.

6. He will allow no noncommissioned officer to obtain drink inside the canteen (except the corporals in their own room).

8. He will have in his possession a list of the defaulters and will not allow them into the canteen except between 7:15 P. M. and 8:15 P. M.

Sergeant of the Guard.

6. Prisoners are not to be allowed out of the guard room except under escort, and no excuse will be taken if they escape.

7. The use of books or papers is not permitted to prisoners, except in the case of men committed to trial who desire to prepare their defense.

Stable Guards.

2. The first relief will be posted at dismiss from midday stables and remain on duty until relieved at 4 P. M., when the second relief will take over the duty till relieved by the night sentry. This second relief will be posted again at reveille the following day and remain on duty till dismiss from midday stables.

3. The stable guard will be responsible for the safety of the horses, the custody of stable utensils, forage and saddlery, the cleanliness and ventilation of the stables.

Stable Duties.

1. There will be three regular stable hours daily, viz: morning, midday and evening. All officers will attend midday stables or after a parade.

2. (a) Morning stables will be at an hour regulated in orders according to the season. At the call for morning stables all noncommissioned officers and men, including employed men and servants, will fall in on the squadron parade and answer their names. The work will be distributed as follows: Cleaning the stables; water; grooming; feeding; cleaning steel work.

(b) Midday stables from 1 to 11 o'clock, or after parades as required; roll will not be called, but the squadron orderly sergeant will ascertain from sergeants of squads if their men are present.

3. When "stables" sounds all the noncommissioned offi-

cers and men will go straight to work, and officers will attend at 11:45 A. M., or when "officers' call" sounds.

4. On return from parades, drills, etc., if the orders are to leave saddles on, every man will unbridle his horse and rack up, then loosen girths, and cross stirrups, unfasten the breast plate. Then go to barrack rooms, change and return to stables when the "call" sounds.

5. The first five minutes must be spent in wiping over all steel work with an oil rag.

6. The following general rules for grooming will then be carried out:

1. Take off saddle and dry back.
2. Pick out feet.
3. Sponge eyes, nostrils and dock.
4. Groom legs and belly.
5. Groom body near side, front to rear, then off side.
6. Groom head.
7. Brush out main and tail.
8. Whisp with damp whisp.

No horse is groomed well unless it is groomed quickly.

7. Officers will remain at stables until it sounds "dismiss;" noncommissioned officers until the saddlery is put up.

8. No man is to commence cleaning his saddlery until his horse has been passed by the noncommissioned officer of the squad to which he belongs.

9. One officer must go round each squadron in the afternoon or evening to see that everything is finished.

10. The great object to be obtained is that the men should learn to clean their horses and saddles quickly, when they should be allowed to leave stables.

13. *Evening Stables.*—When the "call" sounds all non-commissioned officers and men, including employed men and servants, will fall in and hear the orders read. The men will then go to stables. The work will be distributed as follows: Water; grooming and whisping; bed down; feed.

Officers' Servants and Batmen.

1. Officers' servants and batmen will be carefully selected from men of good conduct and character.
2. No man will be taken as an officer's servant without permission of the commanding officer.

Officers' Chargers.

1. Every officer must be in possession of two thoroughly trained chargers.
2. The first must be undocked, and, if possible, the second also.

Orderly Officers' Report.

———— BARRACKS, the — day of ——— 190—.

SIR:

1. I have the honor to report that yesterday the, I visited the cook house at reveille and tested the cocoa and found it was
2. I attended morning stables from o'clock to o'clock and there were men absent.
3. I ascertained that all the horses not excused were sent out to exercise or work, and I superintended all the watering other than at midday stables.
4. I went round all the stables and saw that all the horses received the morning feed.
5. I saw the meat issued ato'clock, the bread at..... o'clock, the groceries at..... o'clock, and sent these supplies away to the cook-houses under charge of the squadron orderly corporals. I saw the forage issued at.....and found it.....
6. I ascertained the orders for ventilation of stables from the veterinary officer, and issued them to squadrons ato'clock.
7. I attended midday stables ato'clock and found
8. I was present at guard-mounting at.....o'clock, and visited the guard room and cells and found
9. I turned out the guard ato'clock by day, and at..... o'clock by night.
10. I visited the sentries at..... o'clock by day, and at..... o'clock by night, and found them alert and acquainted with their orders, and the horses properly tied up and correct.

11. I visited the forge and shops at.....o'clock, and found the tradesmen at work.

12. I attended evening stables from.....o'clock to..... o'clock and found....., and saw that all the horses were fed.

13. I went round the men's breakfasts at.....o'clock; the dinners at.....o'clock; the teas at.....o'clock and found.....

14. I saw all the horses on the long chain at 2 P. M., and all the stable buckets filled with water at dismiss from evening stables.

15. I received watch-setting reports, and ascertained that the lights were out at 10:15 P. M.

16. The canteen was reported cleared and closed at..... o'clock.

17. I visited the cook-houses and ablution rooms and found.....

18. I visited the sick horse lines at.....o'clock and at..... o'clock, and found....., and the men were reported.....

19. I did not leave barracks during my tour of duty, except by order of the commanding officer.

....., Lieutenant,

Orderly Officer First King's Dragoon Guards.

To the Adjutant First King's Dragoon Guards.

Orderly Sergeant-Major's Report.

I certify that I visited the workshops during my period of duty and found them.....

I visited the stablemen frequently during my period of duty and found them posted according to order, and the stables clean.

I paraded the noncommissioned officers and men for school and found all.....

I visited the whole of the stables at.....P. M., and saw that the horses were properly secured.

I paraded the picquet at.....P. M.

I visited the guard and sentries at.....P. M., and found all correct.

I saw the canteen cleared and closed at.....P. M.

I saw the lights out in the corporals' mess at.....P. M.

I saw the lights out in the sergeants' mess at.....P. M.

I was present at stable guard-mounting at.....P. M.

I saw the water troughs cleaned out and filled after evening water.

I saw the dung put in the dung pits.

I was present at exercise.

....., 19
Regimental Orderly.

Regimental Orderly Sergeant's Report.

1. I collected the reports from the squadrons, and reported to the adjutant and regimental sergeant major at A. M.

2. I paraded the sick and took them to hospital at A. M.

3. I posted the corporal detail for canteen duty at A. M.

4. I visited the whole of the stable men at, and found them on their posts, and the stables were The ventilation was as ordered.

5. I accompanied the orderly officer round the breakfasts, dinners and teas.

6. I read the orders to the night guard.

7. I saw the dung pits kept clean.

8. I showed the orders to the commanding officer, second-in-command, adjutant, quartermaster, and riding master.

9. I cleared and closed the canteen at P. M.

10. I took command of the guard from watch setting to reveille.

....., Sergeant,
Regimental Orderly Sergeant.

CAVALRY MACHINE GUNS.

BY LIEUTENANT CESBRUN-LEVAU.

TRANSLATED FROM THE "REVUE DE CAVALERIE"

BY CAPTAIN CHARLES CRAWFORD, TWENTIETH INFANTRY.

WHICH is the best machine gun? We shall not inflict upon our readers descriptions of ancient contrivances such as the blunderbusses or the bombards, nor the more modern machine guns with the revolving barrels, having the appearance of the Roman fasces, worked by hand and called by French or foreign names. At the present time we find in machine gun records two rivals which have the field to themselves—the Maxim and the Hotchkiss. Others, such as the Nordenfeldt, the Bergman, the Colt, etc., are not without great individual merit. However, we are forced to keep within some limits in this discussion, and will confine ourselves to the first two named.

Maxim and Hotchkiss are cosmopolitan gun makers. Their specialization, their patents, the excellence of their products and their display at the Exposition of 1900, caused several States to make them offers for the supply of their perfected arms, which were to be made under the supervision and to stand the test of their respective artillery officers. These houses have their representatives and their houses in the different capitals of the world.

The Hotchkiss is an automatic, single-barreled arm of standard rifle caliber, using therefore the ordinary cartridge, and not one of special make. To get an idea of it, imagine a barrel the length of the infantry gun barrel, under this a tube similar to the barrel but smaller, and like the wooden ramrods of old time guns. The latter tube closed in front and joined at the center to the main barrel by a short vertical tube; at the back end the small tube enters the breech mechanism, which is about the size of a cigar box. At the first shot the powder gas expands into the lower tube during the brief time the projectile is between the connecting tube and the

muzzle. In the lower tube is a piston which, forced back by the gas, presses a spring and puts in motion all the mechanism. The piston works at the rate of ten shots a second, quicker than the needle of a sewing machine. To continue the fire the only thing necessary is to feed it and press the trigger. The fire may also be delivered shot by shot. Take away the hand from the firing mechanism, and the trigger spring thrusts a shaft behind the piston which becomes fixed and the fire ceases. The movement just explained performs all operations necessary to the continuance of the fire; that is, discharge, ejection and loading.

The idea of the automatic arrangement is to use part of the energy of the powder to work the machine without shortening the range. This energy is utilized in moving a piston as steam works in a steam engine. This steam-of-powder machine differs entirely from other similar arms which are worked by the force of recoil. Recoil does not even exist in the automatic powder gas arms, for the propulsion backwards is taken up by the propulsion forward of the piston.

The arrangement of the Maxim machine gun is very different, in that the working of this arm has been, until very lately at least, governed by the principle of utilizing the recoil of the closed barrel. Only recently the manufacturers, realizing that it was impossible to be sure of the working of a contrivance which made use of the recoil, have constructed another machine which works by the action of the powder gas; still there are many points in which it differs from that of the Hotchkiss Company. Maxims are made with and without coolers. With the cooler arm the barrel is immersed in a jacket which is filled with water, and the enormous heat developed during the fire is taken up in the evaporation of this water. The artillery has demanded of these manufacturers a machine gun of the same type without a cooler, the water jacket being discarded for the reason that the steam produced by it can be seen at long ranges.

There seems, however, to be an advantage in keeping the cooler with which there may be fired 2,000 or 3,000 rounds without stopping. After 1,000 rounds continuous firing the

barrel is at white heat. Freezing of the water in the jacket during a winter campaign is no disadvantage, ice being rather desirable under the circumstances. In the tests made by our board of investigation, the Hotchkiss appears to be a superior arm to the Maxim, and in 1899 it was adopted by the Minister of War, General Gallifet, for the purpose, as stated over his signature, of "defending the Alps, and for the colonial service."

At first sight one is struck by the simplicity of the Hotchkiss gun. While its system is similar to that of the Maxim, it has a far less number of pieces. It is dismounted, and dismounted in a very short space of time, by hand and without tools. During experiments made lately at Cherbourg, for the purpose of making an official report on the gun, it was found that replacing a broken extractor after 1,200 shots had been fired continuously, and without inspecting, cleaning or greasing the apparatus, required only seventeen seconds.

It has great stability, due to the rigid tripod and the size and shape of the feet, thus avoiding a source of nervousness to the firer and utilizing all the ballistic power of the cartridge; therefore, at extreme distances the bullet is still deadly. As the sights permit fire to be used at ranges up to the limit of vision, it is no longer possible for a body of troops to maintain deep formations like those of route when they face cavalry or infantry armed with this valuable auxiliary. This precision is due to the rigidity of the barrel and mechanism which weighs fifty-three pounds, stability being added also by the weight of the mounting. The use of a field-glass, range finder, and of fire at different elevations, gives the exact range. The first twenty-four shots fired in quick succession, striking together, raises a little cloud of dust perfectly perceptible to the eye up to 1,300 yards. It would be the same upon firing at a line of the enemy when the men would be seen falling.

The pointing apparatus can be clamped and the dispersion of the shots is then over a very contracted space, but this space may be enlarged by an arrangement which oscillates the barrel laterally or vertically, or a motion may be

given it combining these two. Therefore, if the distance be not accurately known, the sheaf of fire may be dispersed so that part of the projectiles will strike the target. At short distances where the enemy is grouped in rapidly moving spots, the gun may be unclamped and aimed with the butt at the shoulder. The dispersion is thus tripled and results produced capable of annihilating in a few seconds an assaulting column, or even a cavalry charge. The heating of the barrel injures the fire when it exceeds a certain limit. To obviate this, the Hotchkiss has screwed on the gun radiating rings or flanges which have the same role as the stud-ded projections or radiating leaves in automobile cylinders. These are the five disks or plates which appear on the barrel in illustrations of the arm. As to weights, compared with the Maxim, the Hotchkiss with tripod weighs ninety-two pounds and the Maxim one hundred and eighteen pounds.

While the latter gun looks like a small cannon with its water jacket, the former takes up little more room than an ordinary rifle, and can be carried in the hand or on the shoulder. The tripod, when folded, is no more cumbersome. The Hotchkiss is loaded from an arrangement that looks like the flute of Pan—a thin brass plate punched with holes through which the cartridges are thrust, twenty-four and thirty rounds in one plate, which is carried in a special case. There is also a woven belt several yards long, containing 250 to 300 cartridges, like the Circassian or the Boer shoulder belt. In the Cuban war these were found wet and distended by the moisture, but the great defect of this system is that it is difficult to disengage the long belt when it has been started through the mechanism, and there is a temptation, therefore, to exhaust the ribbon by firing it through to the end.

Where the metal loader of rigid brass is preferable is in that it permits better control of the fire, of which the gunner is perfect master.

It is recommended that the empty chargers be gathered up after firing and not left on the field, for they may be re-filled with loose cartridges with the aid of a special device for that purpose, and if need be by hand, and such loaded

chargers will be of great use if the original ones are exhausted.

WEIGHTS.

The horse of the light cavalry carries (estimating at minimum weights) 242 pounds; the horse of the dragoons, 264 pounds; of the cuirasseurs, 286 pounds.

LOAD OF THE MACHINE GUN PACK HORSE.

Gun Pack.

Packsaddle.....	44	pounds
Packsaddle frames.....	18	"
Gun.....	53	"
Tripod.....	40	"
Two filled ammunition cases.....	53	"
Box spare parts.....	12	"
	<u>220</u>	"

Ammunition Pack.

Packsaddle.....	44	pounds
Pack frames.....	18	"
Six filled cases.....	158	"
	<u>220</u>	"

Equilibrium of weights on sides of machine pack horse.

	Off Side.		Near Side.
Gun.....	53	Tripod.....	40
Arm Case.....	26½	Arm Case.....	26½
		Spare Parts.....	13
	<u>79½</u>		<u>79½</u>

The weight of the pack saddle is given with its padding. Besides this there are some straps and the mantas. The new Puteaux tripod weighs forty-six pounds. The Hotchkiss tripod weighing forty pounds, is less bulky, and seems to us better for our arm. The ammunition cases are very light, each one enclosing ten clips of twenty-four rounds each, so that we have on the two packs 480 plus 1440, or 1920 rounds.

We think it best to hold down the weights on these two horses and their oats can be carried by the other horses of the organization. The men serving with the gun carry revolvers instead of carbines, and this permits them to carry more on their horses.

DISPUTE BETWEEN WHEELS AND PACKS.

This, at the present time, is an old question. Each system has its own peculiar advantages and disadvantages. In the majority of countries the cavalry have given us their opinion on this point and seem to prefer transportation on wheels to that on pack saddles. Germans, Austrians, Belgians and Danish use wheels, while both wheels and packs are used in England, and Norway and Sweden have nothing but pack saddles. The discussion is rather tactical than technical, and will be spoken of later, but at present we will content ourselves with saying that we prefer the pack. Wheels carry more ammunition, but with the pack horse we can travel quicker and over more kinds of ground than with wheels.

SADDLERY.

As to horse equipment for the machine gun, we must have a simple, solid, light pattern, permitting the machine to follow us always across country at all gaits and over all obstacles. An adjustable pattern that will not injure the horse's back, and not like those mountain pack saddles, which are themselves veritable mountains, suitable only to a mule gait, and which cannot be used on a galloping horse. We must have, not a tall built, wobbling frame work, but an arrangement that is close fitting and tightly fastened near the body of the horse, the center of gravity being neither too high nor too low, giving full play to the horse's muscles and to his breathing movements; in short, a cavalry equipment more like a saddle to carry a man than like a pack saddle.

Our pack saddle was gotten up with suggestions taken from foreigners, especially the Swiss and the English. These saddles are not bulky and fit the shape of the horse closely, but are still defective in our eyes, in having the articles of the load suspended on hooks, which are fastened in the pad carried on the animal's back. The load, thus arranged, compresses the horse's sides, and on the march injures them by pounding, especially at the fast gaits. A stiff frame work instead of this limber one, which will protect the sides of the horse, is much to be preferred. Thanks to the army

contractors, Messrs. Hotchkiss & Gendron, we have been furnished with a pack saddle which has all the desirable qualities.

Gendron's patented pack has been used several years to carry arms of different kinds, and was exhibited at the exposition of 1900. This saddle has forks of tempered steel, and the joint at the top permits adjustment of their width to the size of the horse. Once adjusted they are absolutely rigid throughout their whole length, the frame work being able to support any load without compression of the sides, and without injury to the horse even in case of a fall. The load, that is, the machine, the tripod and the ammunition cases, do not touch the stuffed cushion which is next the horse. The whole weight of the load is made to rest on the strongest part of the back by means of two plates of thin flexible steel, slightly turned up at the ends and edges. The dimension of the gun, the tripod and of the cases are considered in the construction of the saddle as well as in the adjustment of the angle of the forks by means of screws. As to transport of reserve ammunition, it is the intention to have a regimental cart, a light two-wheeled vehicle like the English model, drawn by two horses tandem, and a division caisson like the artillery model, with four or six horses.

As to cost, a piece of artillery with its equipment costs, without horses, about \$6,000. The machine gun is cheaper, although the price is variable according to the kind of gun and the size of the order. A pack horse machine gun — the kind we will speak of hereafter — is worth, completely equipped, between \$1,000 and \$1,200. The minimum for a large order would be \$1,000. The gun mounted on wheels complete without its caisson, would be worth two-thirds more. They are costly enough, but the cost brings such an excess of fighting power and places us in such a state of superiority that the investment will yield good revenue in military success. The four or five good troop horses that represent the money value of one of these machines, are they equal in destructive power to one of these guns? France is certainly rich enough to issue machine guns to its cavalry. One to a regiment for

trial purposes would cost for all the cavalry of France \$100,000.

USE IN THE TRANSVAAL WAR.

It is interesting to see how these weapons behaved during the three years they were used in the Transvaal and what the opinion of the soldiers who accompanied them was as to their usefulness.

The following is from a report of an English officer who served in South Africa during the campaign of 1900, 1901 and 1902. Each regiment had one or two Maxims. The Hotchkiss, of which he speaks, was experimentally issued to a regiment of lancers. This gun, attached to a squadron, took part in all the operations and fights of this squadron from the 7th of May, 1900, to the 30th of October, 1901, and continued to serve throughout the war. Extracts from the reports are as follows :

“Several days ago an official report on the Hotchkiss machine gun was forwarded, as well as one on two Maxims we have with the regiment. Except two jams, which were fixed at once—due to dust and to pushing the clips into the machine with too much force—it has worked well. There has not been a single break and no part has been replaced. The gun was in more than twelve different engagements and has been transported on horseback a little more than seven months. The maximum number of shots fired at a single time was about 400. The heating of the barrel was negligible. Compared to the two Maxims we have had in the regiment the Hotchkiss has been much the more satisfactory, not only because of its working better, but because of its wearing better. The two Maxims have been put out of order for one reason or another. We had for some time in the brigade a Colt gun, but it was very difficult to make it work in a satisfactory way, and finally it was discarded.”

Another English officer said :

The Maxim stopped sometimes, the Colt worked sometimes, but the Hotchkiss worked all the time. This war has clearly proved that the wheel mounting is not the one for the machine gun; it makes the gun too plain a target and is easily silenced by artillery fire or even by that of infantry.

The Hotchkiss tripod is a very practical one, and permits a frequent use of fire while lying prone."

Another report of later date is not less favorable to that arm :

"Thanks to the fact that the machine gun is carried on a pack saddle, it has accompanied the regiment wherever it went and over all terrains, which were sometimes so rough and difficult that the men were obliged to dismount and lead their horses. Wherever we could not find natural shelter for the gun it was placed prone on the ground, and it always gave satisfactory results. After daily comparison of the relative merits of the Maxim-Nordenfeldt and the Hotchkiss, the latter arm seems to meet all the conditions of service that a machine gun must have to accompany cavalry.

"This gun took part in twenty-seven fights or skirmishes, and fired a total of 10,370 rounds of ammunition in them. The greatest number of shots fired without interruption was 960. Taking account of the character of this war we must note for our future organization of ammunition supply that during the days of hottest fighting the consumption of ammunition never reached 1,000 rounds. Ten thousand rounds were fired in six months. Whether any principle could be deduced from this which would be valuable to apply in a European war would be a question; still the expenditure of ammunition is not so great as one would generally suppose."

Statistics of late wars have taught us that breech-loading rifles are fired at the most at the rate of twenty rounds per day. Automatic arrangements it is true increase the consumption. The machine gun is a great eater, but we believe that it is less subject to stampedes than a line of men. With a picked, intelligent personnel, few in numbers, the machine gun officer is master of his command. The kind of feeders used facilitates adjustment and supervision.

The Hotchkiss, the work of which we have just reviewed, was the only one of its kind among the belligerent squadrons. All the other machine guns in the English army were Maxims. All the foreign armies except Norway and Sweden and Belgium have adopted the Maxim. Why, then, the Hotchkiss for our cavalry? The qualities of the two arms are almost the same. Firing 500 to 600 shots per minute,

the targets made by them cannot be distinguished apart; the shots have the same grouping vertically and laterally. But it is necessary to choose. The Maxim is a good arm, has been thoroughly tested, and is highly prized in Europe. We hardly need do more though than note the delicacy of the mechanism and bulkiness of the water-jacket. This jacket increases the weight of the machine and makes packing it much more difficult. The Hotchkiss is an excellent machine gun; its graceful lines, the simplicity and strength of its mechanism, its cooling radiator and its lightness make it a perfect type of an arm for its proposed service. It is a cavalry arm in every acceptation of the term.

The Hotchkiss has been for several years the machine gun for the French army—on land and sea, in the Alps, the Vosges and the colonies, where the officers who have handled it are partisans to its adoption and do not hesitate to declare it the best machine gun in existence at the present time.

SCHEME OF ORGANIZATION.

MATERIEL.—For each regiment, two machine guns, four pack saddles, one for each gun and one for its ammunition.

It may be thought by some that a better plan would be to have one gun to a squadron, but we must not ask too much at a time.

PERSONNEL.—To man a single gun is required:

	HORSES.
1 Noncommissioned officer	1
2 Cannoneers	2
2 Troopers (pack horse leaders)	4
5	7

An officer, a captain or lieutenant, has charge of the two guns, the personnel, both men and horses, form a part of the designated platoon. The noncommissioned officer is the gunner, and should be a sergeant. The men, chosen for their aptitude and placed under the direct command of the corporal, are part of the same squad called if desirable the machine gun squad. They are called machine gun men, as others are called sappers, scouts, etc.

RECRUITMENT OF THE PERSONNEL.

It is certainly more difficult to find men who are telegraph operators and sappers understanding high explosives than to find men suitable for service with machine guns; the regimental resources should be sufficient. The men must specialize, that is certain, but the relative number of men is very small.

To-day mechanics, chaffeurs of automobiles, builders and other workers in metals are not rare. Any one will do who has natural mechanical ability. To transform these trained, intelligent, skillful men into troopers first and good marksmen afterward is nothing very difficult. Machine gun fire is rifle fire with the great advantage of firing from a support and being seated. As to the mechanism, the soldier with the average amount of intelligence can understand it.

POSITION OF THE GUN DETACHMENT.

In garrison it is not proper that it should turn out every time the regiment does, but when the captain who commands it wishes to take it out, or when the colonel decides to "bring the machine guns" where shall the detachment be stationed? It must be provided for beforehand. Shall it be kept without the field of maneuver of the squadron, wandering here, there and everywhere? We hear maledictions upon it; "Confound the pom-pom!" A blunder is made; "It was the pom-poms; they are always between our feet!" It should not be so. If, as we have said before, the machine gun is a part of the platoon, we must avoid these complaints, which are perfectly justified. The inconvenience of having the guns in the road is not the only thing to be considered. The gun should be like a revolver—always at hand and ready when its services are needed.

At the command, "Cease firing" it must rejoin the platoon at a swift gait. In the moment of action the sabers of the gun detachment are not too many, and the enemy could pounce upon the undefended guns, drive off the men and make away, if detachment operates alone. It is essential that the detachment be embodied with and bound to its proper unit. In column of route the detachment is on the

left or behind the platoon to which it is attached, formed in threes, the pack horse being given the space of two troopers. The noncommissioned officer is abreast of the last three, ready at a signal to disengage the gun from the column by the free side of the road. In line of battle the detachment is in single rank and forms the left of the second rank, covering the last eight troopers of the front rank. When the platoon is in single rank the detachment is on the left. At the charge all draw sabers, even those who are leading the pack horses. It might be that these leaders should have a whip instead of a saber, but we think that the pack horses which are well trained and led will follow without urging by the leaders, and that these leaders themselves will be more at their ease with a saber in their hand instead of a whip. Whether the charge is made in line or as foragers, and the leaders are with or without sabers, they should charge with their platoon. It is not the time for leaving them behind.

PASSING AND JUMPING OBSTACLES.

The detachment must be drilled to move over rough ground so as to accustom the horses to jump and to pass all kinds of obstacles with their leader. It would be well before putting the machine or ammunition on their backs to accustom the pack horses to the breast strap and the breeching, tightening it up by hand while traveling at a fast gait. When it comes to jumping, if we could avoid broken arms and runaway horses, even after being thoroughly drilled, it would be well for the noncommissioned officer or one of the cannoneers to go behind with an artillery whip to urge the lazy or stubborn when they need it.

IN BATTERY.

The machine gun does not do away with the old fighting on foot; but it simplifies it and reinforces it so much that the most of the time the troop commander can keep nearly everybody mounted and get the effect of sixty carbines with the little detachment of five men. The guns may be used in couples as the Swiss do, or singly, or they may be grouped together in batteries. With a single gun,

to "fight on foot" is executed as follows: Upon indication of the troop commander the machine gun officer brings his detachment to the place designated. There all dismount and each of the leaders takes four horses, the pack horses being on the side next to the gun and apart from the other three, to save time in repacking. While the officer uses a field-glass range-finder the two cannoneers quickly unbuckle and place on their shoulders, one the gun and the other the tripod. The noncommissioned officer takes charge of the case of ammunition and the box of accessories. In from one to two minutes, depending on the range of the enemy, the gun is mounted in the place chosen by the officer, and the noncommissioned officer, seated on the tripod leg seat with his eye at the rear sight, awaits the signal to fire.

During the firing the cannoneers feed the piece, the leaders prepare the pack saddle for loading and watch the approaches. There may be a special support, mounted or on foot, if necessary, but generally the entire mounted squadron remains near by behind some shelter, ready to finish with the saber the work of the fire. It is a squadron or squadrons fighting alone. Then too, the machine gun can continue its play all by itself while nine-tenths of the troop leaves it to make a turning movement.

We do not know how to insist enough on this point: that the machine gun is at the disposition of cavalry, and that neglecting it would be more than an error; it would be the renunciation and even the end of our arm. We return to this in the chapter on "Tactics," but the word support from now on means in short that it is better to shoot with a machine gun than to permit ourselves to be hypnotized into paralysis by the idea of conservatism.

In case of alarm, and you must run to save your gun and yourselves, dismount the machine in the twinkling of an eye, carry it off in two pieces across the saddle like a simple carbine. If you are pushed, throw it into the brush or in a pool even and come back for it at night or to-morrow—if you can.

The lightness of the gun and the mounting permits it to be carried about without the horse, over rocks, through woods or copses. Or it may be simply hooked on the horse,

moved to the desired place and taken down again. Fifty pounds of metal on a man's shoulder will make itself felt after some distance if the gait is too fast. An infantryman marches some miles with his equipment of more than fifty pounds, but it is because he is trained to that kind of work daily. If the gun is too heavy for one man to carry, it can easily be carried between two.

1. By what is packed on the horse.
2. By what is carried in the regimental caisson.
3. By what is carried in the division caisson.
4. In depots.

Machine guns have an appetite, and their rations, which must not be touched by carbines, must be made sure of because they are served only in the peculiar form of feeders. We hesitate to give to the machine another ammunition carrier, for that would mean a leader for the pack animal, two horses, and possibly another cannoneer, that is to say, two men and three horses more. This equipment would hinder troop movements, and it is essential that the detachment should be unperceived. Our squadron baggage wagons cannot receive the least excess of baggage; besides, they are too far away in the regimental train. We dreamed for a moment of confiding to the horse artillery the task of making provision for ammunition supply. But the place of artillery is with the larger bodies of troops. Regiments can be detached on special missions, and upon cantonment in the evening would find the resupply of ammunition sometimes impossible.

Each regiment then must have its own cart to provide for its immediate use. It would go along with the light ambulance, and thus not interfere with the regiment's movements. Any thing more or less would be a serious embarrassment. This two-wheeled regimental cart, with the horses tandem, would be attached to the regimental fighting train. One driver would be mounted on the leader and an artificer on the seat of the wagon. This vehicle is loaded with 10,000 rounds of ammunition in belts, packed in cases, and also carries tools and spare parts; (1,000 rounds weighs 100 pounds; each horse draws 660 pounds). The division

caisson will be modeled after the light artillery wagon, four wheeled, drawn by four horses in charge of a corporal, who is mounted on a fifth horse. The wagon carries 20,000 rounds in belts and cases, with spare parts and accessories. The complete system gives us :

For the regiment :	
Detachment packs, 2,000 rounds each	4,000
Regimental caisson	10,000
	<hr/>
	14,000
For a division :	
12 Detachments of machine guns	24,000
6 Regimental caissons	60,000
1 Division caisson	20,000
	<hr/>
	104,000

This is merely a plan of supply and has nothing definite about it. It seems to us more simple and less cumbersome than many foreign systems. However, we may have committed the error of estimating the ammunition supply at too small an amount, at least with the lesser units. We could remedy this, however, as follows :

1. By having two ammunition pack horses with each gun.
2. By giving the regiment the four-wheeled caisson instead of a two-wheeled cart.
3. By making the division caisson a six-horse vehicle carrying 30,000 instead of 20,000 rounds.

Then we would have :

For a regiment :	
With the two detachments	7,000
On regimental caisson	20,000
	<hr/>
	27,000
For a division :	
12 Gun detachment packs	42,000
6 Regimental caissons	120,000
1 Division caisson	30,000
	<hr/>
	192,000

With its 3,000 sabers, its 2,400 carbines, its twenty-four machine guns and its eight cannons and, in spite of this heavy and redoubtable material, as free and light as formerly, the modern cavalry division, armed to the teeth can act in the fullness of its strength under any circumstance of

war. The lack of a cuirass seems to matter no longer. *It has no more need of infantry.* Its horse machine guns are its reinforcing battalions. It carries them along almost without noticing it, just where they are wanted at whatever pace it pleases. It is characterized by the horse, cold steel and fire action, the three arms synthetized, and while remaining wholly itself it constitutes a veritable army corps, a very much reduced army it is true, but complete. It is well that it should be so, since the exigencies of war now demand such a condition. Whether we like it or not cavalry will be obliged more than once, if it wishes to see daylight, to transform itself into an arm fighting with fire action. At these times, and may they be as brief as possible, but which will be more frequent than we think, we cannot always choose our methods, and it behooves us to have the best fire action at our disposition. Whether we will or no, it will be fire against fire. We will find ourselves facing large bodies of well trained infantry, which is undisturbed by the blows of our battering rams and we must needs have an arm which will promptly reestablish the equilibrium in our favor. Therefore, reproaching us for seeking to transform cavalry into mounted infantry is undeserved, since we have but one end in view while writing these lines—the search for the best way of fighting on foot while remaining mounted, and breaking down with the least loss of time the barriers which arrest the movements of our squadrons.

THE USE OF MACHINE OR AUTOMATIC GUNS FOR CAVALRY.

BY CAPTAIN E. R. HEIBERG, SIXTH CAVALRY.

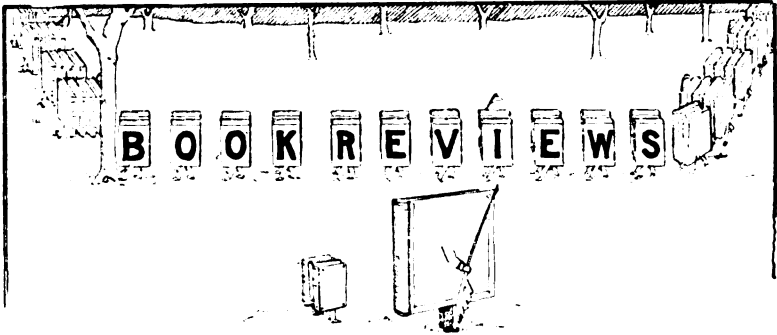
THE machine gun is strictly a defensive weapon, hence its desirability for use with the cavalry arm becomes limited to rare occasions. When such occasions do arise, however, a machine gun becomes a powerful reinforcement. Cavalry rear guards, harassing patrols, and small forces of cavalry (single troops for instance) operating alone, would perhaps be most benefited by the addition of a rapid-fire gun. The knowledge that the troop had a powerful weapon of defense would render it still more independent and able to take greater risks.

There is no necessity for any regular organization, in my mind. By that I mean that machine guns and crews would not be permanently assigned to organizations, their existence with a body depending upon the nature of the service that body was about to undertake. To this end, post ordnance officers should be supplied with the gun adopted for use with cavalry, and squads from each troop detailed for instruction in its use, so that every troop would have always in readiness a squad prepared to take charge at a moment's notice.

To a single troop only one machine gun should be assigned; more would make the troop too dependable on the guns, and would require more men and horses than could be spared.

Several of the volunteer cavalry troops which served in Porto Rico during 1898 were provided with Colt's rapid-fire guns. Two men were trained to manipulate each gun, and between them carried all the parts of their gun (barrel, tripod, etc.) on their horses. I frequently saw these guns operated, and was impressed at the time with their simplicity, light weight, and all around fitness for use with cavalry on occasions.

The calibre should be the same as that used in our small arm.



**Napier's
Peninsula
War.***

The Hudson & Kimberly Publishing Company is keeping up its good work of providing a military library, including the best military books extant. We have just received the first volume of their new undertaking of bringing out an edition of "The Peninsula War." The first volume is nicely bound in green cloth. This volume contains nineteen plates, which are good and clear reproductions, and are legible throughout, as is not always the case with maps and plans in military books. For this provision the publishers are to be commended.

Major W. A. Shunk, Eighth United States Cavalry, formerly instructor at the infantry and cavalry school, has assisted in the preparation of this edition, and has prepared a complete and comprehensive index, a feature in which this edition differs from and surpasses all others. These books form a valuable edition to the already long list of Mr. Hudson's publications.

*HISTORY OF THE WAR IN THE PENINSULA AND IN THE SOUTH OF FRANCE FROM THE YEAR 1807 TO THE YEAR 1814. By Major General Sir W. F. P. Napier, K. C. B., Colonel Twenty-seventh Regiment. With fifty-five maps and plans. Published by Hudson-Kimberly Publishing Company, Kansas City, Missouri.

The Service of Security and Information.* It would hardly seem necessary to comment on this new edition of *Security and Information*, the simple announcement being sufficient for such a well-known and thoroughly appreciated work. As the author says, the principles set forth in his book have had practical application in war in Cuba, Porto Rico, the Philippines and China, and the army will add that they have satisfactorily stood the test. The author says: "While the recent campaigns of our armies in the West Indies and the Orient have evolved nothing radically new on the subject treated herein, they have afforded some valuable illustrations of the application of old principles to new conditions, and have lent additional emphasis to many of the matters set forth in former editions of this work." The entire army can testify that the book has stood the practical test of war, and has stood it well. The work had provided for all cases and a thorough knowledge of the book was a great help to officers and enlisted men alike.

The book has been adopted by the War Department as the authorized text book at all the schools. It now remains to introduce it in the noncommissioned officers' school universally. It may not be necessary, some will say, to teach the noncommissioned officers everything in the book, but just where to draw the line between what to include and what to exclude will be a difficult matter. It should and must of course be left to the instructor of the school. In the April and in the July issue of the *CAVALRY JOURNAL* will be found essays on this subject. Both essays use the "Security and Information" as a reference book and as a model in preparing for the practical work. The book lends itself so admirably to this purpose that we need search no further for a manual on the subject.

While the book has been used as a text book for study and recitation and for the acquirement of theoretical knowledge, and has been proven a most excellent authority, it is as a practical guide for the instruction of a command that its

*THE SERVICE OF SECURITY AND INFORMATION. Tenth edition. Revised in the Light of Recent American Campaigns. By Colonel A. L. Wagner, Adjutant General's Department. Hudson-Kimberly Publishing Company, 1903.

greatest use is to be found. The essays mentioned above point out the manner in which the book may be used to provide for practical work. All the problems undertaken by a small garrison, or a large one for that matter, may be taken right from the text. Patrolling is such an important duty that more time should be taken for the instruction of the enlisted men. This subject is thoroughly and exhaustively treated in a most lucid manner and with a logical arrangement. It is on that account that the book is so well suited for progressive practical instruction. It is not only a text book for officers but a model of its kind for practical work with all grades. It is to bring out this value in practical work of this most excellent book, that this review of it is inserted in the CAVALRY JOURNAL.

**Napoleon's
Maxims
of War.***

This little volume of 144 pages contains much interesting matter put together in a very pleasing and readable manner. It contains seventy-eight maxims, taken from Napoleon's writing, giving them tersely and concisely. Each maxim has about a page of foot notes giving an historical example illustrating the principle laid down in the maxim. The last maxim in the book explains the excuse for the publication :

"Peruse again and again the campaigns of Alexander, Hannibal, Cæsar, Gustavus Adolphus, Turrenne, Eugene and Frederick. Model yourself upon them. This is the only means of becoming a great captain, and of acquiring the secret of the art of war. Your own genius will be enlightened and improved by this study, and you will learn to reject all maxims foreign to the principles of these great commanders."

The author of the notes, General Burnod, adds to this :

"It is in order to facilitate this object that I have formed the present collection. It is after reading and meditating upon the history of modern war that I have endeavored to illustrate by examples how the maxims of a great captain may be most successfully applied to this study."

* NAPOLEON'S MAXIMS OF WAR. With notes by General Burnod. Published by Hudson-Kimberly Publishing Co., 1904.

The book would seem to be of especial use to the student of military history in locating examples which illustrate certain principles. It is too bad on that account that this edition is not supplied with a good index, which would make the book a more valuable reference volume. This is, however, a fault quite common in military books.

The People's War in France, 1870-1871.* We have received for review from Hugh Rees, London, a very handsomely bound and well printed volume on the Franco-German War. To those who have not the opportunity for a thorough perusal of that excellent work, the German official account of this war, this present work should be a welcome addition to the history of that year. The author, Colonel Lonsdale Hale, states that he has endeavored to produce an easily readable account. It will not be necessary to study this book and follow the events with a pair of dividers on an intricate map. As an aid to avoid this close following on the map, usual with official accounts, the author has appended to the name of each place when first mentioned, in rectangular brackets, the distances to important points, and further illustrations and explanatory remarks.

The author lays no claim to polished language in his text, and yet the chapter on "Human Nature in War and the 'Persönlichkeit' of the German Leaders" is splendid reading and interesting also. This is a most important part of the book. The personality and character of those in high command play a most prominent part in war. Hoenig attaches the greatest importance to the knowledge of the character of the soldiers in command for a full understanding of the operations of a campaign. A precis of the introductory chapter of the fifth volume of Hoenig's work, is here given. In this precis the relation of commanders and their chiefs of staff is well brought out.

This, however, is not the only interesting chapter in the book. They are well written and in narrative form, not

*THE PEOPLE'S WAR IN FRANCE, 1870-1871. By Colonel Lonsdale Hale. Published by Hugh Rees, Limited, London, 1904.

mere accounts with voluminous tables of organization and recapitulation of forces and their strength which furnishes so much tedious reading matter in official accounts.

In the introduction of the book are given the reasons for calling the latter part of this gigantic struggle "The People's War." It also shows how the Germans made errors, and why a people's war differs from others. The author says: "The German authorities made mistakes similar to those our own authorities made in the 'People's War' in South Africa and which will be made in every 'People's War' that ever takes place. For in every such war, owing to the density of the 'fog of war,' that confronts and surrounds the invader, his plans and combinations are frequently based on guesses and hypotheses only, and his operations are then those of blindfolded strategy and blindfolded tactics."

Withal it makes most interesting reading, and its perusal is well worth close attention.

Field Fortifications.* The present is the fifth edition of this work, the scope and intention of which is fully described in the title. This edition is revised to May, 1904, and while intended primarily for officers of the British service is equally useful for others. The ground covered is about the same as that in Beach's Manual. It is not in text book form, but rather in the shape of a succession of memoranda, and has many notes and suggestions of value. The chapters on fire of rifles, machine, field, and siege guns, with the various projectiles, and on the location, arrangement and concealment of trenches, are particularly good. The book contains a number of problems on the dimensions of earth works, tasks, strength of materials, power of tackle, etc., and is concluded by a number of suggested examination questions in good shape as an aid to self review of the subject.

*FIELD FORTIFICATIONS. Notes on the text books. Specially designed and arranged for the use of officers preparing for promotion examinations. By Major-General H. D. Hutchinson. Published by Gale & Polden, Ltd. London. Four shillings, post free.

Manual for Non-commissioned Officers.* This is a small pocket edition and will prove a valuable addition as an assistant to instruction in security and information. The purpose of the author is to save time to others who may desire to carry out a progressive scheme of instruction in this important subject by making available to every troop officer a scheme instantly ready for use. The purpose of the author has been well carried out, and the pamphlet deserves general circulation in the cavalry arm.

*MANUAL FOR NONCOMMISSIONED OFFICERS OF A TROOP OF CAVALRY IN SECURITY AND INFORMATION. By Lieutenant J. J. Boniface, Fourth Cavalry. Hudson-Kimberly Publishing Company, Kansas City, Missouri.



JOURNAL OF THE UNITED STATES CAVALRY ASSOCIATION.

Broad Arrow, under date of May 21st, gives space to the following notice of the CAVALRY JOURNAL for April, 1904:

"The April issue of this magazine contains a number of interesting articles. Lieutenant-Colonel S. L. Woodward, Seventh Cavalry, in the opening chapter of 'Grierson's Raid' gives a graphic description of the operations of Colonel B. H. Grierson's brigade of cavalry in Mississippi in April, 1863. The raid was intended as a diversion in the rear of the Confederacy in order to assist General Grant in his operations against Vicksburg and to cut communication between Pemberton in Vicksburg and Bragg in middle Tennessee. In 'Five Years a Dragoon,' P. G. Lowe commences an account of his experiences and adventures on the Great Plains from 1849 to 1854, and describes in an interesting manner the trouble with the Pawnees and the inter-tribal fighting between the Sioux, Cheyenne, Arapahoe and Snake Indians. Lieutenant E. C. Masee, Seventh United States Infantry, writes on the method best suited in the United States army for imparting practical instruction in security and information to the noncommissioned officers of a company of infantry, and includes a scheme for progressive exercises in the subject. The article deals with orientation and map-reading, advance guards, outposts, patrolling, rear guard, and combined exercises. Lieutenant-Colonel C. F. Chase, Twelfth United States Cavalry, describes General Young's campaign in North Luzon in the Philippines in 1899. It is a highly interesting article and is very well illustrated. It gives a capital description of the cavalry operations which resulted in the scattering of Aguinaldo's large army of insurgents. The conclusions drawn from the operations are: (1) The American soldier may live on the products of any country that supports the human race, and his endurance in the tropics itself is superior to the soldier of the tropical countries; (2) Horses may be transported any distance by rail and water,

and be in condition for work at the end of the journey. The American-bred horse constantly showed his superiority in endurance to the native Philippine pony; (3) The superiority of cavalry as a rapidly moving force, capable of fighting on foot or horseback as the conditions demanded; (4) The horse enables his rider to retain his strength and energy for the supreme moment of battle, whereas troops marching on foot, under a hot sun, reach the limit of endurance much sooner, and in any modern conflict the nation which has at the beginning a large force of well trained cavalry will have a marked advantage over one which is without such an arm, or which attempts to improvise it in the emergency. These conclusions are well deserving the attention of our own authorities.

"Other articles included in the JOURNAL deal with the subjects of cavalry machine guns, cavalry arms, and the charge *en lava* of the Russian cavalry. The Russo-Japanese War is dealt with by way of extracts from various sources and there are several important notes, reprints and translations.

"The JOURNAL, which occupies nearly 300 pages and contains numerous illustrations, is a most creditable production, and speaks highly for the *esprit de corps* of the United States cavalry. The Association and the editor of the JOURNAL are to be congratulated on the success with which they have carried out a truly remarkable enterprise. If we may be allowed to make a suggestion, it would be that specimen copies be sent to our principal Service clubs and institutions, in order that officers of our own mounted branch may see what their brother officers in the United States are doing, and perhaps, in the spirit of emulation, be encouraged to follow so admirable a lead."

ST. MENIN PORTRAITS.

Dr. William J. Campbell, the well-known bookseller of Philadelphia, is writing an elaborate work on St. Menin Portraits. It will be in eight volumes, with over eight hundred and thirty engraved portraits, all on separate pages. The basis of the book will be the famous "collection" of 761 proofs, made by the artist himself, which has recently come into Dr. Campbell's possession.

The Corcoran Gallery of Art and the Library of Congress, both of which have extensive collections, are coöperating

with the author, giving him the free use of any portraits that are not in his own collection.

Any of our readers who have information, either biographical or genealogical, about any portrait that St. Menin made, or any information as to the present location of any original crayon, coppers or engravings, will confer a favor on the author by communicating with him.

Due credit will be given in the book for all information received.

Dr. Campbell's address is 1228 Walnut Street, Philadelphia.

PALAIS DU COSTUME.

The management of the Palais du Costume on the "Pike," at the Fair, has just closed a deal that will probably add much to the popularity of the exhibition as it will be seen in St. Louis.

It is generally known that the Palais du Costume was one of the features of the Paris Exposition most admired by the public.

In one sense of the term it is a historical collection of the gowns worn by woman from the earliest authentic period to the present. It was made by M. Felix, the famous Parisian costumer, and it required years of time, expense and labor as it was seen at the Paris Exposition, and it is here in its entirety.

It is the most pretentious gown show that has been seen in any country, and in addition to the commercial value of the exhibit, is historically correct.

These costumes will be seen on an immense stage behind a crystal glass curtain and will be arranged in tableaux, representing different epochs of fashion's history.—*St. Louis Special Correspondence.*

NEW COLT TARGET REVOLVER.

The new United States service model revolver made by the Colt's Patent Fire Arms Manufacturing Company, should prove of much interest to all military men. It is fitted with special target sights. The front sight is adjustable for elevation, giving a very wide range, which is especially desirable in a target revolver, to be used at different ranges for varying loads, the sighting always being perfect. The rear sight is adjustable for windage. The stocks are of fine selected walnut, handsomely checked. Full blued finish. The action is hand finished, and is perfect in all details. The guard, straps and trigger are finely checked. The arm, like the Colt's New Army is designated for .38 Long Colt (United States service cartridge). It will also use the special and gallery loads down to the light charge with round bullet



MEMBERSHIP OF THE UNITED STATES CAVALRY ASSOCIATION.

We give the list of members in the Association in somewhat different form, the names being now arranged alphabetically.

It is the intention to correct this list with every issue. If any errors are noted it will be conferring a favor if you will call attention to them.

The Association is anxious to increase its membership and in its efforts to do this all the members can give their assistance. If you know of any prospective members or subscribers, or any person who might be interested in the JOURNAL, the Council will be glad to have the address so, that a copy of the JOURNAL may be mailed.

ALPHABETICAL LIST OF MEMBERS.

- Abbott, James E., 1 lt. 6 cav., Fort Keogh, Mont.
- Adams, Sterling P., capt. 14 cav., Manila, P. I.
- Albright, F. H., capt. 25 inf., Lafayette, Ind.
- Aleshire, J. B., maj. Q. M., Washington, D. C.
- Allen, Chas. J., brig. gen. ret., 1828 Jefferson Place, Washington.
- Allen, Henry T., capt. 6 cav., Manila, P. I.
- Anderson, E., capt. 7 cav., Camp Thomas, Ga.
- Anderson E. D., capt. 12 cav., Manila, P. I.
- Anderson, Geo. S., col. 8 cav., Jefferson Bks.
- Andrews, H. M., maj. art., Ft. Leavenworth.
- Andrews, L. C., capt. 15 cav., West Point.
- Andrus, E. P., maj. 3 cav., Ft. Assiniboine.
- Appleton, D., col., 130 W. 59 st., N. Y.
- Armstrong, P., capt. 9 cav., Ft. Walla Walla.
- Armstrong, W. H., 2 lt. P. R., Cayey, P. R.
- Arnold, Fred. T., capt. 4 cav., Ft. Riley, Kas.
- Arnold, Percy W., 1 lt. 1 cav., Ft. Clark, Texas.
- Arnold, Sam'l B., capt. 1 cav., Ft. Clark, Texas.
- Augur, Colon, capt. ret., Evanston, Ill.
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- Babcock, C. S., 1 lt. 3 cav., Ft. Leavenworth.
- Babcock, J. B., brig. gen. ret., Ballston, N. Y.
- Babcock, Walter C., capt. 13 cav., Manila, P. I.
- Bach, C. A., 1 lt. 7 cav., Camp Thomas, Ga.
- Baer, Joseph A., 1 lt. 6 cav., West Point.
- Bailey, Harry L., maj. 2 inf., Ft. Logan, Col.
- Baird, Geo. H., 2 lt. 11 cav., Ft. Riley, Kas.
- Baird, Wm., capt. ret., Annapolis, Md.
- Baldwin, Frank D., brig. gen., Denver, Colo.
- Ball, Louis R., 1 lt. 13 cav., Manila, P. I.
- Bamberger, R. S., 2 lt. 7 cav., Ft. Leavenworth.
- Banister, Wm. B., maj. M. D., Jefferson Bks. Mo.
- Bargar, B. R., lt. col., Columbus, Ohio.
- Barnard, J. H., 2 lt. 5 cav., Ft. Huachuca, Ariz.
- Barnum, M. H., capt. 8 cav., Jefferson Bks.
- Barriger, Wm. S., 2 lt. 15 cav., Ft. Ethan Allen.
- Barry, John A., 2 lt. 2 cav., Manila, P. I.
- Barry, Thomas H., brig. gen., Atlanta, Ga.
- Barton, F. A., capt. 3 cav., Ft. Yellowstone.
- Barton, R. M., 1 lt. 5 cav., Ft. Huachuca, Ariz.
- Bates, W. E., cornet, Merion, Pa.
- Beach, F. H., capt. 7 cav., Camp Thomas, Ga.
- Beach, Wm. D., maj. 10 cav., Washington.
- Beck, Wm. B., capt. ret., care of Wm. F. Turner & Co., Naples, Italy.
- Bell, Jas. M., brig. gen. ret., Washington.
- Bell, J. F., brig. gen., Ft. Leavenworth.
- Bell, O. W., capt. 7 cav., Camp Thomas, Ga.
- Bell, Sherman L., adj. gen., Denver, Col.
- Bell, W. H., Jr., 2 lt. 1 cav., Ft. Sam Houston.
- Bellinger, J. B., maj. Q. M., Washington.
- Benjamin, J. J., 1 lt. 8 cav., Ft. Apache, Ariz.
- Benson H. C., capt. 4 cav., Jefferson Bks. Mo.
- Bernard, T. P., 2 lt. 3 cav., Ft. Assiniboine.
- Biddle, D. H., 1 lt. 6 cav., Ft. Meade, S. Dak.
- Biddle, James, col. ret., San Francisco, Cal.
- Biddle, John, maj. eng., Washington, D. C.
- Biegler, George W., 1 lt. 12 cav., Manila, P. I.
- Bigelow, John Jr., maj. 9 cav., Wawona, Cal.
- Bigelow, M. O., capt. 8 cav., West Point, N. Y.
- Bishop, H. S., maj. 5 cav., Ft. Apache, Ariz.
- Bixby, W. H., lt. col. eng., Jones bldg., Detroit.
- Bliss, Tasker H., brig. gen., Washington, D. C.
- Blockson, A. P., maj. 1 cav., Ft. Clark, Tex.
- Blunt, S. E., lt. col. O. D., Rock Island Arsenal.
- Boice, Chas. H., 1 lt. 7 cav., Camp Thomas, Ga.
- Bonus, P. S., lt. col. 6 cav., Ft. Keogh, Mont.
- Boniface, J. J., 1 lt. 4 cav., Ft. Leavenworth.
- Booth, Ewing E., 1 lt. 7 cav., Camp Thomas, Ga.
- Boughton, D. H., maj. 11 cav., Ft. Leavenworth.
- Bowditch, Myron B., 2 lt. 10 cav., Ft. Washakie.
- Bowen, W. H. C., maj. 12 inf., Buffalo, N. Y.
- Bowie, H., 1 lt. 9 cav., Oklahoma City, Okla.
- Bowman, George T., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
- Boyd, Carl, 2 lt. 3 cav., Ft. Yellowstone, Wyo.
- Boyd, Charles T., capt. 10 cav., Reno, Nev.
- Braden, C., 1 lt. ret., Highland Falls, N. Y.
- Brainard, D. L., maj. C. S., New York City.
- Breck, Samuel, brig. gen. ret., Boston, Mass.
- Brees, H. J., 1 lt. sig. corps, Ft. Wood, N. Y.
- Brett, Lloyd M., capt. 7 cav., Washington, D. C.
- Briand, Christian, 1 lt. 15 cav., Ft. Myer, Va.
- Briggs, Allan L., 1 lt. sig. corps, Ft. Myer, Va.
- Bristol, Matt C., 2 lt. 13 cav., Manila, P. I.
- Brooks, E. C., capt. 11 cav., Ft. Sheridan, Ill.
- Brown, L. T., lt. col. 3rd & Smallwood sts., Pittsburg, Pa.
- Brown, L. G., 2 lt. 12 cav., Manila.
- Brown, Oscar J., capt. 1 cav., Ft. Clark, Tex.
- Brown, R. A., capt. 4 cav., Ft. Leavenworth.
- Brown, William C., capt. 1 cav., Ft. Clark, Tex.
- Bryan, R. B., capt. 5 cav., Ft. Huachuca, Ariz.
- Bryant, W. A., capt. Montclair, N. J.
- Buchanan, E. A., 2 lt. 9 cav., Wawona, Cal.
- Buchan, F. E., 1 lt. 3 cav., Fort Leavenworth.
- Bull, Henry T., 2 lt. 13 cav., Manila, P. I.
- Burkhardt, S. Jr., capt. 19 inf., Vancouver Bks. Wash.
- Burnett, Chas. 2 lt. 15 cav., Ft. Myer, Va.
- Burnett, George R., 1 lt. ret., Iowa City, Ia.
- Burroughs, James M., 1 lt. 12 cav., Manila, P. I.
- Bush, F. N., lt., Peoria, Ill.
- Butler, James S., 1 lt. sig. corps, Seattle, Wash.
- Butler, Matt C. Jr., capt. 7 cav., World's Fair Station.
- Butler, Rodman, 2 lt. 6 cav., Ft. Keogh, Mont.
- Byram, Geo. L., capt. 6 cav., Ft. Meade, S. Dak.
- Cabanias, A. A., capt. 21 inf., Ft. Missoula.
- Cable, Wm. A., lt. 103 W 55th st., New York.
- Cabell, De Rosey C., capt. 1 cav., Ft. Clark, Tex.
- Caldwell, R. C., 1 lt. 7 cav., Camp Thomas, Ga.
- Calvert, E., 1 lt. 9 cav., Ft. Walla Walla, Wash.
- Cameron, Geo. H., capt. 4 cav., Ft. Riley.
- Camp, Beauford R., 2 lt. 9 cav., S. Francisco.
- Card, C. S. lt., 1139 Clarkson st., Denver, Col.
- Carlton, C. H., brig. gen. ret., Ft. Monroe, Va.
- Carpenter, E., capt. art., Ft. Totten, N. Y.
- Carpenter, L. H., brig. gen. ret., Philadelphia.
- Carr, Camillo C. C., brig. gen., St. Paul, Minn.
- Carr, Eugene A., brig. gen. ret., Washington, D. C.
- Carroll, Henry, col. ret., Lawrence, Kans.
- Carson, John M., Jr., maj. Q. M. D., West Point.
- Carson, L. S., 1 lt. 8 cav., Ft. Leavenworth.
- Carson, T. G., capt. 10 cav., Ft. Washakie, Wyo.
- Carter, Wm. H., brig. gen., Manila, P. I.
- Cartmell, N. M., 1 lt. 10 cav., Ft. Robinson, Neb.
- Case, Frank L., 1 lt. 12 cav., Manila, P. I.
- Cassidy, H. C., capt., 2205 Calumet ave., Chicago.
- Castee, D. T. E., 1 lt. 7 cav., Camp Thomas, Ga.
- Cathro, Thos. E., 2 lt. 13 cav., Manila, P. I.
- Cavanaugh, H. La T., capt. 10 cav., Ft. Robinson, Neb.

- Chaffee, Adna R., lt. gen., Washington, D. C.
 Chapman, L. A. I., 1 lt. 1 cav., Ft. Leavenworth.
 Chase, Geo. F., lt. col. 12 cav., Manila, P. I.
 Chase, John, brig. gen., Denver, Col.
 Cheever, B. H., maj. 6 cav., Ft. Meade, S. D.
 Chitty, Wm. D., capt. 4 cav., Columbia, Mo.
 Churchill, C. Robert, capt., 407 Morris Bld, New Orleans.
 Clark, Chas. H., maj. O. D., Springfield, Mass.
 Clark, Will H., 913 Marquette Bldg, Chicago.
 Clark, Wm. F., capt. 2 cav., Manila, P. I.
 Clayton, P., jr., capt. 11 cav., Jefferson Bks., Mo.
 Clopton, Wm. H., jr., 1 lt. 13 cav., Manila, P. I.
 Cocke, J., 2 lt. 11 cav., Jefferson Bks., Mo.
 Coffey, Edgar N., 1 lt. 2 cav., Manila, P. I.
 Cole, C. W., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Cole, Geo. M., gen., Hartford, Conn.
 Cole, James A., capt. 6 cav., Ft. Meade, S. Dak.
 Coleman, S., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Collins, R. L., 2 lt. 2 cav., Ft. Bayard, N. M.
 Collins, Thos. D., maj., Gainesville, Tex.
 Comly, George B., 1 lt. 3 cav., West Point.
 Conklin, John, jr., capt. art., Ft. Ethan Allen.
 Connell, W. M., 1 lt. 7 cav., Ft. Leavenworth.
 Conrad, C. H., capt. 3 cav., St. Louis Exposition.
 Conrad, Julius T., capt. 3 cav., Chester, Pa.
 Converse, G. L., capt. ret., Columbus, Ohio.
 Cooley, W. M., 2 lt. 5 cav., Ft. Wingate, N. M.
 Cooper, C. L., brig. gen. ret., Denver, Col.
 Cootes, Harry N., 1 lt. 12 cav., Manila, P. I.
 Coppock, E. R., 2 lt. 3 cav., Ft. Leavenworth.
 Corcoran, Thos. M., capt. 13 cav., Manila, P. I.
 Cornell, W. A., 1 lt. 10 cav., Ft. Robinson, Neb.
 Cornish, L. W., capt. 9 cav., San Francisco.
 Coughlan, T. M., 1 lt. 2 cav., Manila, P. I.
 Counselman, W., capt., 315 Rush st., Chicago.
 Cowell, T. R., capt., Parkersburg, W. Va.
 Cowin, W. B., 1 lt. 3 cav., Ft. Assiniboine.
 Cowles, W. H., 2 lt. 4 cav., Ft. Riley.
 Cox, Edwin L., 2 lt. 9 cav., San Francisco.
 Cox, A. B., 1 lt. 8 cav., Jefferson Bks., Mo.
 Craig, H., jr., 1917 Chestnut st., Philadelphia.
 Craig, J. W., capt. 12 cav., Manila, P. I.
 Craig, M., capt. 10 cav., Ft. Leavenworth.
 Craighill, Wm. E., capt. eng., Mobile, Ala.
 Craigie, D. J., brig. gen. ret., Washington, D. C.
 Crane, Chas. J., lt. col. 8 inf., San Juan, P. R.
 Craycroft, Wm. T., 1 lt. ret., Dallas, Texas.
 Cress, Geo. O., capt. 4 cav., Ft. Riley, Kan.
 Crimmins, M. L., 1 lt. 10 inf., Ft. Lawton, Wash.
 Croft, E., 1 lt. 19 inf., Fort Leavenworth.
 Crosby, Herbert B., capt. 11 cav., Manila, P. I.
 Crowder, E. H., col. J. a., Washington, D. C.
 Crozier, Wm., brig. gen., Washington, D. C.
 Cruise, Thos., maj. Q. M. dept., St. Louis.
 Cullen, D., 1 lt. 3 cav., Ft. Yellowstone, Wyo.
 Culver, C. C., 2 lt. 15 cav., Ft. Myer, Va.
 Cunningham, T. H., 2 lt. 8 cav., Ft. Leavenworth.
 Curry, W. L., capt., Columbus, O.
 Cusack, Joseph E., capt. 12 cav., Manila, P. I.
 Dade, A. L., capt. 13 cav., Manila, P. I.
 Dallam, S. F., capt. 5 cav., Ft. Apache, Ariz.
 Dalton, H. F., 1 lt. 6 inf., Ft. Leavenworth.
 Davidson, A. H., 1 lt. 18 cav., Manila, P. I.
 Davis, B. O., 2 lt. 10 cav., Ft. Washakie, Wyo.
 Davis, C. O., capt., Corsicana, Tex.
 Davis, E., 1 lt. 11 cav., Ft. Des Moines, Iowa.
 Davis, F. E., 2 lt. 8 cav., Jefferson Bks., Mo.
 Davis, G. B., brig. gen., Washington, D. C.
 Davis, Ira D., capt., Houston, Tex.
 Davis, M. F., capt. 1 cav., Ft. Leavenworth.
 Davis, Norman H., 2 lt. 14 cav., Manila, P. I.
 Davis, W., col. ret., The Albion, Baltimore, Md.
 Day, Clarence R., capt. 5 cav., Macon, Mo.
 Dean, J., 1 lt. 15 cav., Ft. Leavenworth.
 Deegan, J. A., 1 lt. 12 cav., Manila, P. I.
 Deltrick, L. L., 1 lt. 13 cav., Manila, P. I.
 Dickman, J. T., capt. 8 cav., Washington, D. C.
 Discue, B. F., 1 lt. 3 cav., Ft. Assiniboine.
 Dixon, V. D., 1 lt. 5 cav., Ft. Wingate, N. Mex.
 Dodd, G. A., maj. 3 cav., Philadelphia.
 Dodge, C. C., gen., 10 E 76 St., New York.
 Dodge, Francis S., brig. gen., Washington, D. C.
 Dodge, T. A., capt. ret., New York City.
 Dolan, T. J., capt., 2021 Walnut st., Philadelphia.
 Donaldson, T. Q., capt. 8 cav., Ft. Sill, O. T.
 Donovan, A. E., vetn. art., Vancouver Bks.
 Dorcy, B. H., 1 lt. 4 cav., Ft. Leavenworth.
 Dorst, J. H., col. 8 cav., Ft. Assiniboine.
 Dougherty, C. A., 2 lt. 13 cav., Manila, P. I.
 Drake, C. B., capt. 14 cav., Manila, P. I.
 Dudley, Clark D., 1 lt. 14 cav., Manila, P. I.
 Duff, Robt. J., capt. 8 cav., Ft. Riley.
 Duvall, W. P., maj. art., Washington, D. C.
 Dyer, Ed. H., maj., Rutland, Vt.
 Early, Orson L., 2 lt. 8 cav., Ft. Riley.
 Eaton, W. R., lt. box 932, Denver, Col.
 Egerly, Winfield S., col. 2 cav., Manila, P. I.
 Edmond, C. W., lt., 425 Walnut st., Philadelphia.
 Edwards, Frank A., maj. 4 cav., Rome, Italy.
 Edwards, Frank B., 1 lt. art., Ft. Hamilton.
 Edwards, Frank B., 2 lt. 4 cav., St. Paul, Minn.
 Edwards, W. W., 2 lt. 10 cav., Ft. Robinson, Neb.
 Elliott, S. H., capt. 11 cav., Ft. Des Moines, Ia.
 Ellis, R. B., 2 lt. 13 cav., Presidio, S. Francisco.
 Elinge, LeRoy, capt. 15 cav., Ft. Ethan Allen.
 Ely, E. J., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Ely, H. E., capt. 26 inf., Ft. Sam Houston, Tex.
 Engel, E., 2 lt. 9 cav., Ft. Walla Walla, Wash.
 English, E. G., 2 lt. 5 cav., Ft. Wingate, N. M.
 Enos, Copley, 2 lt. 1 cav., Ft. Clark, Texas.
 Erwin, J. B., maj. 9 cav., Ft. Walla Walla, Wash.
 Estes, Geo. H., jr., capt. 20 inf., Manila, P. I.
 Esty, Thos. B., 2 lt. 9 cav., Three Rivers, Cal.
 Eustes, H. L., lt., 1410 Jackson ave., New Orleans, La.
 Evans, E. W., capt. 8 cav., Jefferson Bks., Mo.
 Evans, Geo. H., capt. ret., Pittsburg, Pa.
 Fair, John S., 1 lt. 9 cav., San Francisco.
 Farber, Chas. W., capt. 8 cav., 53 Broadway, Albany, N. Y.
 Farmer, Chas. C., jr., 1 lt. 10 cav., Ft. Robinson.
 Farnsworth, Chas. S., capt. 7 inf., Manila, P. I.
 Farnum, F. H., 2 lt. 11 inf., Ft. D. A. Russell.
 Faulkner, A. C., 1 lt. art., Ft. Du Pont, Del.
 Fecht, Jas. E., 1 lt. 9 cav., Ft. Leavenworth.
 Fenton, C. W., capt. paymr (cav.), Manila.
 Fisher, Ronald E., 2 lt. 14 cav., Manila.
 Fitch, Roger S., 1 lt. 1 cav., Ft. Clark, Texas.
 Fleming, L. J., capt. Q. M., San Antonio, Tex.
 Fleming, R. J., capt. 10 cav., Ft. Robinson.
 Foerster, L., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Foltz, Fred S., capt. 2 cav., Manila, P. I.
 Fonda, Ferd. W., 1 lt. 10 cav., Ft. Leavenworth.
 Foote, S. M., capt. art., Ft. Myer, Va.
 Forbush, W. C., col. ret., The Markeen, 1291 Main St., Buffalo, N. Y.
 Foreman, Milton J., maj., 3412 Vernon Ave., Chicago.
 Forsyth, Jas. W., maj. gen. ret., Columbus, O.
 Forsyth, Wm. W., capt. 6 cav., Ft. Keogh, Mont.
 Fortescue, G. R., 1 lt. 10 cav., Washington.
 Foster, A. B., capt. 19 inf., Ft. Lawton, Wash.
 Foster, Fred W., capt. 5 cav., Ft. Apache, Ariz.
 Foster, Leo F., capt. art., Ft. Moultrie, S. C.
 Fountain, S. W., lt. col. 4 cav., Jefferson Bks.
 Foy, Robert C., 1 lt. 1 cav., Fort Clark, Texas.
 Fraser, Walter, vet. 13 cav., Manila, P. I.
 Freeman, H. B., brig. gen. ret., Leavenworth.
 Fuller, C. J., capt., Salinas, Cal.
 Fuller, A. M., capt. 9 cav., Knoxville, Tenn.
 Fuller, Ezra B., maj. 7 cav., Columbia, S. C.
 Funston, Fred., brig. gen., Vancouver Bks.
 Furlong, J. W., capt. 6 cav., Ft. Meade, S. D.
 Galbraith, J. G., maj. 1 cav., Des Moines, Ia.
 Gale, George H. G., maj. I. g. d., Star Building, St. Louis.
 Gardenhire, W. C., 2 lt. 15 cav., Ft. Ethan Allen.
 Gardner, Edwin F., lt. col. M. D., Atlanta, Ga.
 Gardner, John H., capt. 2 cav., Manila, P. I.
 Garity, George, 1 lt. 2 cav., Manila, P. I.
 Garrard, Joseph, lt. col. 11 cav., Manila, P. I.
 Gaston, Joseph A., maj. 1 cav., Ft. Clark, Tex.
 Gatley, Geo. G., capt. art., Manila, P. I.
 Gaujot, Julien E., 1 lt. 11 cav., Ft. Des Moines Iowa.

- Gibbins, H., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Gillem, Alvan C., 1 lt. 4 cav., Dallas, Texas.
 Glasgow, Wm. J., capt. 13 cav., Manila, P. I.
 Gleaves, S. R., 1 lt. 1 cav., Ft. Sam Houston
 Godfrey, E. S., col. 9 cav., Ft. Walla Walla, Wash.
 Godson, W. F. H., 1 lt. 10 cav., Ft. Robinson.
 Godwin, E. A., lt. col. 9 cav., San Francisco.
 Goring, R. B., 1 lt. 15 cav., Ft. Ethan Allen.
 Goldman, H. J., capt. 5 cav., Ft. Apache, Ariz.
 Goodale, Geo. S., capt. 23 inf., Manila.
 Goode, George W., capt. 1 cav., Ft. Clark, Tex.
 Goodspeed, Nelson A., 2 lt. 3 cav., Ft. Assiniboine, Mont.
 Gordon, Geo. A., col. Savannah, Ga.
 Gordon, Wm. W., 2 lt. 2 cav., Manila, P. I.
 Gould, J. H., vetn. 11 cav., Ft. Riley, Kas.
 Graham, Alden M., 2 lt. 1 cav., Ft. Sam Houston, Tex.
 Granger, R. S., 1 lt. art., Ft. Riley.
 Grant, Frederick D., brig. gen. Chicago, Ill.
 Grant, Walter S., 1 lt. 3 cav., St. Paul, Minn.
 Gray, Alonzo, capt. 14 cav., Manila, P. I.
 Greely, Adolphus W., brig. gen. chf. sig. off., Washington, D. C.
 Gresham, John C., maj. 15 cav., Ft. Meyer, Va.
 Grierson, B. H., brig. gen. ret., Jacksonville, Ill.
 Grierson, C. H., capt. 10 cav., Ft. Robinson.
 Griffith, F. D., jr., 2 lt. 6 cav., Ft. Meade, S. Dak.
 Griggs, Everett G., capt., Tacoma, Wash.
 Groome, J. C., capt., 1222 Walnut st., Philadelphia, Pa.
 Gross, F. W., col., 142 Logan Ave., Denver, Col.
 Grove, W. R., capt. sub. dept., Kansas City.
 Grunert, G., 2 lt. 11 cav., Ft. Sheridan, Ill.
 Grutzman, W. K., vetn. 15 cav., Ft. Myer, Va.
 Guest, John, capt. ret., Washington, D. C.
 Guilfoyle, J. F., maj. A. G. Dept., Washington.
 Haight, C. S., 1 lt. 4 cav., World's Fair Station.
 Haldeman, Horace L., lt. col., Real Estate Bldg., Philadelphia, Pa.
 Hall, W. P., brig. gen., Washington, D. C.
 Hammond, Andrew G., maj. 3 cav., St. Louis.
 Hammond, C. L., 4627 Greenwood Ave., Chicago.
 Hanna, M. E., capt. 3 cav., Havana.
 Harbord, James G., capt. 11 cav., Manila, P. I.
 Hardeman, L., capt. 11 cav., Ft. Des Moines, Ia.
 Herdle, Francis H., maj. 14 cav., Manila, P. I.
 Hardin, E. E., maj. 7 inf., Manila, P. I.
 Harper, Roy B., capt. 3 cav., Ft. Yellowstone.
 Harris, E. R., 2 lt. 11 cav., Ft. Des Moines, Ia.
 Harris, F. W., capt., 4 cav., Vienna, Austria.
 Harris, Moses, maj. ret., New York City.
 Harrison, Ralph, capt. 2 cav., Manila, P. I.
 Hart, A. C., 1 lt. 10 cav., Ft. Robinson, Nebr.
 Hartman, J. D. L., capt. 1 cav., Ft. Leavenworth.
 Harvey, Charles G., 1 lt. 2 cav., Manila, P. I.
 Hasson, John P., 1 lt. 6 cav., Ft. Meade, S. Dak.
 Hathaway, C. E., 2 lt. 9 cav., Monterey, Cal.
 Hawkins, Clyde E., capt. 2 cav., Manila, P. I.
 Hawkins, H. S., capt. sub. dept., Denver, Colo.
 Hay, W. H., capt. 10 cav., Ft. Robinson, Nebr.
 Hayden, John L., capt. art., San Francisco.
 Hayden, Ralph N., 2 lt. 7 cav., Camp Thomas.
 Havne, Paul T., jr., 1 lt. 11 cav., Manila, P. I.
 Hazzard, Oliver P. M., 1 lt. 2 cav., Manila, P. I.
 Hazzard, Russell T., 1 lt. 1 cav., Ft. Clark, Tex.
 Heard, J. W., capt. 3 cav., Ft. Assiniboine.
 Heaton, Wilson G., 1 lt. 13 cav., Manila, P. I.
 Hedekin, C. A., capt. 3 cav., Ft. Apache, Ariz.
 Heiberg, E. R., capt. 6 cav., Ft. Meade, S. Dak.
 Heidt, Grayson V., 1 lt. 14 cav., Manila, P. I.
 Hein, O. L., lt. col. 10 cav., Hot Springs, Ark.
 Heintzelman, S., 1 lt. 6 cav., Ft. Keogh, Mont.
 Hemphill, J. E., 1 lt. sig. corps, Ft. Wood, N. Y.
 Hennessey, P. J., 2 lt. 5 cav., Ft. Huachuca.
 Henry, Guy V., capt. 12 cav., Manila, P. I.
 Henry, J. B., jr., 2 lt. 4 cav., Fort Leavenworth.
 Herman, Fred J., 1 lt. 9 cav., Wawona, Cal.
 Hero, W. S., lt., 622 Commercial Place, New Orleans, La.
 Herron, Joseph S., capt. 2 cav., Manila, P. I.
 Hersher, F. W., 1 lt. 4 cav., Ft. Leavenworth.
 Hickey, J. B., maj. 11 cav., 25 3d Ave., N. Y.
 Hickman, E. A., 1 lt. 1 cav., Ft. Leavenworth.
 Hickok, H. R., capt. 15 cav., Ft. Myer, Va.
 Hilgard, M. R., 1 lt. 16 inf., Ft. Slocum, N. Y.
 Hill, Wm. P., vetn. 12 cav., Manila, P. I.
 Hill, Zeph T., maj., Denver, Col.
 Hirsch, Harry J., capt. 20 inf., Manila, P. I.
 Hodges, H. L., 2 lt. 1 cav., Ft. Sam Houston, Tex.
 Hodson, F. G., maj. Q. M. D., Vancouver Bks.
 Hoff, J. V. R., lt. col. M. D., Ft. Leavenworth.
 Holabird, S. B., brig. gen. ret., Washington, D. C.
 Holbrook, L. R., capt. 5 cav., Ft. Huachuca.
 Holbrook, W. A., capt. 5 cav., Whipple Bks.
 Holliday, Milton G., 2 lt. 15 cav., Ft. Myer, Va.
 Hope, F. W., lt., Broad and Front sts., Red Bank, N. J.
 Hopkins, A. T., lt., Watertown, S. D.
 Hoppin, C. B., maj. 15 cav., Ft. Ethan Allen, Vt.
 Hornbrook, J. J., capt. 12 cav., Manila, P. I.
 Horton, W. E., capt. Q. M. D., Ft. Jay, N. Y. City.
 Howard, H. P., capt. 14 cav., Manila, P. I.
 Howard, J. H., 2 lt. 9 cav., San Francisco.
 Howell, J. R., col., Bohemian Club, San Francisco.
 Howze, R. L., capt. 6 cav., Washington, D. C.
 Hoyle, George S., maj. ret., Atlanta, Ga.
 Huggins, E. L., brig. gen. ret., St. Augustine, Florida.
 Hughes, J. B., capt. 4 cav., Jefferson Bks. Mo.
 Hughes, Martin B., col. 1 cav., Ft. Clark, Tex.
 Hume, John K., 2 lt. 14 cav., Manila, P. I.
 Hunsaker, I. L., 2 lt. 3 cav., Ft. Apache, Ariz.
 Hunt, Levi P., maj. 13 cav., Manila, P. I.
 Hunter, G. K., maj. 6 cav., Ft. Meade, S. Dak.
 Hunt, Geo. G., col. ret., Carlisle, Pa.
 Huston, James, 1 lt. 10 cav., Ft. Leavenworth.
 Hyde, A. P. S., 1 lt. art., Ft. Terry, N. Y.
 Hyer, B. B., capt. 13 cav., Lexington, Mo.
 Ingerton, W. H., capt., Amarillo, Tex.
 Irons, J. A., maj. insp. gen., Washington, D. C.
 Jackson, Henry, brig. gen. ret., Leavenworth.
 Jackson, R. F., 1 lt. 3 cav., Washington Bks.
 Jacobs, Douglas H., 2 lt. 14 cav., Manila, P. I.
 Jeffers, S. L., 1 lt. 7 cav., Camp Thomas.
 Jenkins, J. M., capt. 5 cav., West Point.
 Jennings, T. H., 2 lt. 7 cav., Camp Thomas.
 Jervey, E. P., jr., capt. 10 cav., Oklahoma City.
 Jewell, Chas. H., vetn. 13 cav., Manila, P. I.
 Newell, James M., 2 lt. 14 cav., Manila, P. I.
 Johnson, A., capt. 13 inf., Alcatraz Island, Cal.
 Johnson, C. P., capt. 10 cav., Ft. Robinson, Neb.
 Johnson, F. O., maj. 5 cav., Ft. Wingate, N. M.
 Johnson, F. C., 1 lt. 2 cav., Ft. Leavenworth.
 Johnson, H. B., 2 lt. 3 cav., Ft. Assiniboine.
 Johnson, G., 1 lt. sig. corps, Ft. Meyer, Va.
 Johnston, J. A., brig. gen., 2111 Mass. ave., Washington, D. C.
 Johnston, W. T., capt. 15 cav., Ft. Meyer, Va.
 Jones, C. R., 273 S. Fourth st., Philadelphia.
 Jones, F. M., 1 lt. 9 cav., Three Rivers, Cal.
 Jones, S. G., capt. 11 cav., Ft. Des Moines, Ia.
 Jordan, H. B., 1 lt. O. D., Sandy Hook, N. J.
 Joyce, K. A., jr., 2 lt. 6 cav., Ft. Meade, S. Dak.
 Jurich, A. J., 2 lt. 4th cav., Jefferson Bks. Mo.
 Karnes, Wm. L., 1 lt. 6 cav., Omaha, Neb.
 Keller, Frank, 2 lt. 8 cav., Jefferson Bks. Mo.
 Kelly, Wm., 1 lt. eurk., P. O. Bldg., New London, Conn.
 Kelly, W., jr., capt. 9 cav., West Point, N. Y.
 Kelly, William H., capt., 140 Glenway st., Dorchester, Mass.
 Kendall, Henry F., maj. 12 cav., Manila, P. I.
 Kendall, Henry M., maj. ret., Soldiers' Home, Washington.
 Kennedy, W. B., maj. ret., Los Angeles, Cal.
 Kennington, Alfred E., capt. 7 cav., Washington, D. C.
 Kerr, J. B., col. 12 cav., Manila.
 Kerr, James T., lt. col. a. g., Washington, D. C.
 Kerth, Monroe C., capt. 23 inf., Manila, P. I.
 Ketcheson, J. C., Leavenworth, Kan.
 Keyes, Allen C., 2 lt. 14 cav., Manila, P. I.
 Keyes, E. A., 2 lt. 6 cav., Ft. Leavenworth.
 Kilbourne, Louis H., 2 lt. 8 cav., Ft. Sill, Okla.

- Kilian, Julius N., capt sub. dept., Manila, P. I.
 Kimball, Gordon N., 1 lt. 12 cav., Manila, P. I.
 King, Albert A., 1 lt. 8 cav., Ft. Sill, Okla.
 King, Charles, brig. gen., Milwaukee, Wis.
 King, Ed L., capt. 2 cav., West Point, N. Y.
 Kirkman, Hugh, 1 lt. 8 cav., Ft. Sill, Okla.
 Kirkpatrick, George W., capt. 15 cav., Ft. Ethan Allen, Vt.
 Kline, J., brig. gen. ret., Ft. Snelling, Minn.
 Knight, J. T., maj. gen. dept., Philadelphia.
 Knox, R. S., 1 lt. 24 inf., Ft. Missoula, Mont.
 Knox, Thomas M., 1 lt. 4 cav., Ft. Riley, Kas.
 Knox, T. T., col. ret., New York City.
 Kochersperger, S. M., capt. 2 cav., Manila, P. I.
 Koehler, L. M., capt. 4 cav., Ft. Leavenworth.
 Kramer, J. L., maj., Parkersburg, W. Va.
 Kromer, L. B., 1 lt. 11 cav., West Point, N. Y.
 Krumm, Herbert Z., 2 lt. 1 cav., Ft. Clark, Tex.
 Lacey, F. E., jr., capt. 1 inf., Ft. Wayne, Mich.
 Lahm, F. P., 2 lt. 6 cav., West Point.
 Lake, B. M., capt., Alcutt P. O., Denver.
 Landis, J. F. R., capt. 1 cav., West Point.
 Langdon, J. G., 1st lt. a. i., San Francisco.
 Langhorne, G. T., capt. 11 cav., Manila, P. I.
 Lanza, C. H., capt. art. corps, Birmingham, Ala.
 Leach, S. S., maj. eng., Ft. Leavenworth.
 Lear, B., jr., 1 lt. 5 cav., Ft. Ethan Allen, Vt.
 Leary, E. M., capt. 11 cav., San Francisco.
 Lebo, Thos. C., col. 14 cav., Manila, P. I.
 Lechtman, C., col., Kansas City, Mo.
 Lee, Fitzhugh, brig. gen. ret., Richmond, Va.
 Lee, Fitzhugh, jr., 1 lt. 12 cav., Manila, P. I.
 Lee, Geo. M., 1 lt. 4 cav., Ft. Riley, Kan.
 Lee, J. M., brig. gen., San Antonio, Tex.
 Leasher, R. W., 2 lt. 3 cav., Ft. Yellowstone, Wyo.
 Lewis, C. R., lt. 23 inf., Manila, P. I.
 Lewis, J. H., 1 lt. 5 cav., Ft. Wingate, N. M.
 Lewis, LeRoy D., 2 lt. 4 cav., Ft. Riley, Kan.
 Lewis, T. J., capt. 2 cav., Louisville, Ky.
 Lincoln, James R., brig. gen., Ames, Iowa.
 Lindsey, J. R., capt. 15 cav., Ft. Ethan Allen.
 Lindley, Elmer, capt. 1 cav., Ft. Clark, Tex.
 Linger, Clarence, 2 lt. 1 cav., Ft. Clark, Tex.
 Lipincott, Aubrey, 1 lt. 14th cav., Manila, P. I.
 Litterbrant, W. T., capt. 12 cav., Manila, P. I.
 Liverman, H. T., capt., Mansfield, La.
 Livermore, R. L., capt. 10 cav., Ft. Bayard, N. M.
 Lochridge, P. D., capt. 13 cav., Manila, P. I.
 Lockett, James, maj. 4 cav., Ft. Riley, Kan.
 Lockwood, J. A., capt. ret., 530 5th ave., N. Y.
 Logan, A. J., col., 119 8d ave., Pittsburg, Pa.
 Long, John D., 1 lt. 12 cav., Manila, P. I.
 Longstreet, Jas. jr., 1 lt. 13 cav., Manila, P. I.
 Lot, Abraham G., capt. 6 cav., Ft. Meade, S. D.
 Loud, John S., maj. ret., Washington, D. C.
 Love, Moss L., 2 lt. 2 cav., Manila, P. I.
 Love, Robt. R., 2 lt. 9 cav., Three Rivers, Cal.
 Lovell, Geo. E., 1 lt. 7 cav., Camp Thomas, Ga.
 Lowe, A. W., maj., Lynn, Mass.
 Lowe, Wilson, maj., Upper Alton, Ill.
 Lowe, Wm. L., 1 lt. 13 cav., Manila, P. I.
 Ludington, M. I., maj. gen. ret., Skaneateles, Onondaga Co., New York.
 Luedeka, E. C., lt. 245 Seminary ave., Chicago.
 Luhn, Wm. L., 1 lt. 11 cav., Ft. Riley, Kan.
 Lull, C. T. E., lt. art. cf. Worden, Wash.
 Lusk, Wm. V., vetn. 2 cav., Manila, P. I.
 Lynch, Frank E., 2 lt. 2 cav., Manila, P. I.
 Lyon, C. A., col., Sherman, Texas.
 McAndrews, Jos. R., 1 lt. 1 cav., Manila, P. I.
 MacArthur, Arthur, maj. gen., San Francisco.
 MacLeod, Norman, lieut., North American Bldg., Philadelphia.
 McCabe, E. R. W., 2 lt. 6 cav., Ft. Keogh, Mont.
 McCain, Wm. A., 2 lt. 3 cav., Ft. Riley, Kas.
 McCarthy, D. E., maj. Q. M. D., Ft. Leavenworth.
 McCaskey, D., 1 lt. 4 cav., Ft. Leavenworth.
 McCaskey, Wm. S., brig. gen., Manila, P. I.
 McClelland, E. J., maj. a. g., St. Louis, Mo.
 McClintock, J., lt. 5 cav., Ft. Wingate, N. M.
 McClure, A. W., 1 lt. 5 cav., Ft. Duchesne, Utah.
 McClure, N. F., capt. 5 cav., Huachuca, Ariz.
 McCord, J. H., lt. col., St. Joseph, Mo.
 McCormick, L. S., maj. 7 cav., Ft. Leavenworth.
 McCormack, W. H., capt. 9 cav., Wawona, Cal.
 McCoy, Frank R., capt. 8 cav., Manila, P. I.
 McCrossin, E. J., 614 Nat. Bank Bld., Birmingham, Ala.
 MacDonald, A., vetn. 11 cav., Ft. Des Moines, Ia.
 MacDonald, G. H., capt. 1 cav., West Point.
 McDonald, J. B., capt. 3 cav., Ft. Assiniboine.
 McEnhill, Frank, 2 lt. 2 cav., Manila, P. I.
 McFadden, J. F., lt. 121 Chestnut st., Philadelphia.
 McGee, Oscar A., 1 lt. 2 cav., Manila, P. I.
 McGonntgle, J. A., lt., Leavenworth, Kan.
 McKenney, Henry J., 1 lt. 14 cav., Manila, P. I.
 McKee, Will J., gen., Indianapolis.
 McKinley, James F., 1 lt. 14 cav., Manila, P. I.
 Macklin, J. E., lt. col. 3 inf., Columbus Bks., O.
 McMullen, J. I., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 McMurdo, C. D., vetn. 10 cav., Ft. Robinson.
 McNally, R. E., 1 lt. 3 cav., gen. hos., Washington Bks., D. C.
 McNamee, M. M., capt. 15 cav., rectg. serv. 81 Railroad Bldg., 1515 Larimer st., Denver.
 McNarney, F. T., 1 lt. 6 cav., Ft. Meade.
 Macomb, A. C., capt. 5 cav., Ft. Huachuca, Ariz.
 Macomb, M. M., maj. art. corps, Washington.
 Maize, Sidney D., 2 lt. 3 cav., Boise Bks., Idaho.
 Mangum, W. P., jr., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Mann, H. E., 2 lt. 7 cav., Camp Thomas, Ga.
 Marshall, F. C., capt. 15 cav., Ft. Ethan Allen.
 Martin, I. S., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Martin, J. W., lt., 1709 Walnut st., Philadelphia.
 Martin, W. F., 1 lt. 2 cav., Manila, P. I.
 Mason, Chas. W., maj. 4th inf., Manila, P. I.
 Maus, M. P., col. 20 inf., Manila, P. I.
 Mayo, Charles R., 2 lt. 12 cav., Manila, P. I.
 Meade, W. G., 2 lt. 11 cav., Ft. Riley, Kan.
 Mearns, Robert W., capt. 20 inf., Manila, P. I.
 Mears, Fred., 2 lt. 5 cav., Ft. Leavenworth.
 Megill, S. C., 2 lt. 8 cav., Jefferson Bks., Mo.
 Mercer, W. A., capt. 7 cav., Whitecross, Utah.
 Merritt, W., maj. gen. ret., Washington, D. C.
 Metcalf, W. S., gen., Lawrence, Kan.
 Meyer, Oren B., capt. 14 cav., Manila, P. I.
 Michie, R. E. L., capt. 12 cav., Manila, P. I.
 Miller, Alex. M., col. eng., Washington, D. C.
 Miller, A. M., jr., capt. 9 cav., Ft. Walla Walla.
 Miller, Archie, 1 lt. 6 cav., Ft. Keogh, Mont.
 Miller, E. L., lt., 510 Madison ave., Albany.
 Miller, O., lt., 501 Russell ave., Cleveland, O.
 Miller, Wm. H., lt. col. Q. M. dept., Chicago, Ill.
 Mills, Albert L., capt. 1 cav., West Point, N. Y.
 Mills, A., brig. gen. ret., Washington, D. C.
 Mills, S. C., col. insp. gen. dept., Washington.
 Milton, A. M., 2 lt. 4 cav., Jefferson Barracks.
 Miner, C. W., gen. ret., The Chittenden, Columbus, Ohio.
 Mitchell, George E., capt. 13 cav., Manila, P. I.
 Mitchell, H. E., 2 lt. 3 cav., Boise Bks., Idaho.
 Moffet, Wm. P., 1 lt. 13 cav., Manila, P. I.
 Mohn, A. J., 2 lt. 4 cav., Jefferson Bks., Mo.
 Monohan, J. J., capt., West Chelmsford, Mass.
 Moore, Francis, brig. gen., Fort Riley, Kan.
 Moore, J. A., lt. art. corps, Savannah, Ga.
 Morey, Lewis S., 1 lt. 12 cav., Manila, P. I.
 Morgan, G. H., maj. 9 cav., University of Minnesota, Minneapolis, Minn.
 Morgan, John M., capt. 12 cav., Manila, P. I.
 Morris, W. V., 1 lt. 6 cav., Ft. Meade, S. Dak.
 Morrison, C. E., col., Parkersburg, W. Va.
 Morrow, H. M., maj. j. a., San Francisco, Cal.
 Morrow, J. J., capt. eng., Washington, D. C.
 Morton, C., col. 7 cav., Camp Thomas, Ga.
 Morton, C. E., 1 lt. 16 inf., Ft. Slocum, N. Y.
 Moseley G. V. H., 1 lt. 1 cav., San Antonio, Tex.
 Moses, G. W., capt. pay dept., Kansas City, Mo.
 Mott, T. B., capt. art. corps, Paris, France.
 Mowry, P., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Mueller, Albert H., 2 lt. 8 cav., Ft. Riley, Kan.
 Mueller, R. W., capt., Milwaukee, Wis.
 Müller, C. H., 2 lt. 10 cav., Ft. Robinson, Neb.
 Mumma, Morton C., 1 lt. 2 cav., Manila, P. I.
 Munro, H. N., 2 lt. 1 cav., Ft. Sam Houston.

- Munro, J. N., capt. 3 cav., Ft. Assiniboine.
 Murphy, P. A., capt. 1 cav., West Point, N. Y.
 Murphy, Will H., capt., Corsicana, Tex.
 Murray, C. H., maj. 4 cav., Ft. Leavenworth.
 Myers, Hu B., 1 lt. 5 cav., Ft. Wingate, N. M.
 Nance, John T., capt. 9 cav., Presidio, San Francisco, Cal.
 Naylor, C. J., 2 lt. 4 cav., Jefferson Bks. Mo.
 Naylor, W. K., capt. 9 inf., Ft. Leavenworth.
 Nicholson, Wm. J., major 7 cavalry, Camp Thomas, Ga.
 Nichols, Wm. A., maj. insp. gen'l dept., St. Louis, Mo.
 Nissen, A. C., capt. 5 cav., Ft. Huachuca, Ariz.
 Noble, Robert H., capt. 3 inf., Manila, P. I.
 Nockolds, C., vetn. 1 cav., Ft. Sam Houston, Tex.
 Nolan, D. E., capt. 30 inf., Washington, D. C.
 Nolan, Robert M., 1 lt. 1 cav., Ft. Clark, Tex.
 Norman, Wm. W., capt., 2 Punjab cav.
 Norton, Clifton K., 2 lt. 15 cav., Ft. Myer, Va.
 Norvell, Guy S., 1 lt. 8 cav., Jefferson Bks. Mo.
 Norvell, S. T., lt. col. ret., Tallahassee, Fla.
 Notmeyer, Wm. C. lt., Pierre, S. D.
 Noyes, Charles R., maj. 9 inf., Omaha, Neb.
 Noyes, Henry E., col. ret., Potter Valley, Cal.
 Oakes, James, col. ret., Washington, D. C.
 O'Connor, Charles M., maj. 14 cav., Manila, P. I.
 Odell A. S., 1 lt. 11 cav., Ft. Riley.
 Oden, G. J., 1 lt. 10 cav., Ft. Mackenzie, Wyo.
 Offley, Edward M., 2 lt. 12 cav., Ft. Clark, Tex.
 Oliver, L. W., 1 lt. 8 cav., Ft. Riley, Kan.
 Oliver, Prince A., 2 lt. 5 cav., Ft. Apache, Ariz.
 Olmstead, E., North Broad St., Elizabeth, N. J.
 Orton, Edward P., capt. 2 cav., Manila, P. I.
 O'Shea, John, capt. 4 cav., Jefferson Bks. Mo.
 Otis, Frank I., 2 lt. 8 cav., Ft. Riley, Kan.
 Ott, Frederick M., capt., Harrisburg, Pa.
 Overton, W. W., 2 lt. 15 cav., Ft. Ethan Allen.
 Paddock, G. H., lt. col. 5 cav., Ft. Apache.
 Page, Charles, col. ret., Baltimore, Md.
 Patne, Wm. H., capt. 7 cav., Camp Thomas, Ga.
 Palmer, B., 1 lt. 10 cav., Ft. Robinson, Neb.
 Palmer, H. W., lt., 2711 Prospect St., Tacoma.
 Parker, C., jr., lt., 765 Broad st., Newark, N. J.
 Parker, Dexter Wm., Meriden, Conn.
 Parker, F. Le J., capt. 12 cav., Manila, P. I.
 Parker, James, lt. col. adj. gen'l's dept., Star bldg., St. Louis, Mo.
 Parker, J. S., capt. 10 cav., Ft. Mackenzie, Wyo.
 Parker, Samuel D., 50 State st., Boston, Mass.
 Parsons, L., capt. 8 cav., Fayetteville, Ark.
 Patterson, W. L., 1 lt. Porto Rico regt., Cayey.
 Pattison, H. H., capt. 8 cav., Ft. Assiniboine.
 Paxton, R. G., capt. 10 cav., Ft. Robinson, Neb.
 Pearson, D. C., maj. 2 cav., Manila, P. I.
 Pearson, S. B., 1 lt. 9 cav., Three Rivers, Cal.
 Penn, Julius A., capt. 7 inf., Manila, P. I.
 Penfield, W. G., lt. ord. dept., Watertown Arsenal, N. Y.
 Perkins, A. S., 1 lt. 1 cav., Ft. Clark, Texas.
 Perkins, Chas. E., capt., Nogales, Arizona.
 Perrins, Wm. A., maj., box 7, Roxbury, Mass.
 Perry, Alex. W., capt. 1 cav., Ft. Des Moines.
 Perry, Oran, gen., Indianapolis.
 Pershing, J. J., capt. 15 cav., Oklahoma City.
 Pershing, W. B., 1 lt. 4 cav., Ft. Leavenworth.
 Phillips, Arvin L., capt. 13 cav., Manila, P. I.
 Pilcher, W., 1 lt. 9 cav., Ft. Bayard, N. M.
 Pletcher, J., maj. 6 cav., Ft. Yellowstone, Wyo.
 Place, Olney, 2 lt. 6 cav., Ft. Leavenworth.
 Plummer, F. H., maj. 3 inf., San Francisco, Cal.
 Poillon, Arthur, 1 lt. 14 cav., Manila, P. I.
 Pond, G. E., col. Q. M. dept., Washington, D. C.
 Poore, Benj. A., capt. 6 inf., Ft. Leavenworth.
 Pope, Francis H., capt. 14 cav., Manila, P. I.
 Pope, Wm. R., 2 lt. 2 cav., Manila, P. I.
 Power, F. L., capt., Lebanon, Ore.
 Powers, Robert B., capt. 7 cav., Camp Thomas.
 Pratt, Richard H., col. ret., Carlisle, Pa.
 Prentice, J., 2 lt. art. corps, Ft. Screven, Ga.
 Price, G. E., 2 lt. 10 cav., Ft. Robinson, Neb.
 Prichard, G. B., jr., capt. 5 cav., Ft. Huachuca.
 Purinton, G. A., 1 lt. 8 cav., Ft. Sill, Okla.
 Purviance, S. A., 1 lt. 4 cav., Ft. Leavenworth.
 Ramsey, Frank De W., capt. 9 inf., 22 Jackson Place, Washington, D. C.
 Randolph, H. M., maj., Denver, Col.
 Randolph, W. F., maj. gen. ret., Washington.
 Rankin, R. C., maj., Las Vegas, New Mex.
 Rawle, James, lt., Bryn Mawr, Pa.
 Rawley, Wm. B., lt. col. 2118. 6 st., Philadelphia.
 Raymond, J. C., capt. 2 cav., Manila, P. I.
 Raysor, M. C., 1 lt. 5 cav., Ft. Apache, Ariz.
 Read, B. A., 1 lt. 6 cav., Ft. Meade, S. Dak.
 Read, G. W., capt. 9 cav., Washington, D. C.
 Read, John H., jr., 2 lt. 14 cav., Manila, P. I.
 Read, R. D., jr., maj. 10 cav., Ft. Mackenzie.
 Reaney, R. J., 1 lt. 2 cav., Ft. Leavenworth.
 Reed, Wm. O., 1 lt. 6 cav., World's Fair, St. Louis.
 Reeves, Jas. H., capt. 14 cav., Manila, P. I.
 Remington, F., 301 Webster ave., New Rochelle, New York.
 Rethorst, Otto W., 1 lt. 8 cav., Ft. Sill, Okla.
 Reynolds, Robt. W., 2 lt. 13 cav., Manila, P. I.
 Rhea, J. C., 1 lt. 7 cav., Chickamauga Park, Ga.
 Rhodes, A. L., 2 lt. art. corps, Ft. Strong, Mass.
 Rhodes, C. D., capt. 6 cav., Washington, D. C.
 Rice, S., capt. 3 cav., Ft. Assiniboine, Mont.
 Rich, A. T., 2 lt. 26 inf., Ft. McIntosh, Tex.
 Richard, J. B., capt., 28 Walling st., Providence, R. I.
 Richmond, H. S., capt., 747 Madison ave., Albany, N. Y.
 Ridgway, T., capt. art., Ft. Snelling, Minn.
 Riggs, Kerr T., 2 lt. 11 cav., Manila, P. I.
 Righter, J. C., jr., 1 lt. 4 cav., Ft. Leavenworth.
 Ripley, Henry L., maj. 8 cav., Ft. Sill, Okla.
 Ripple, Ezra H., Scranton, Pa.
 Rivers, T. R., capt. 4 cav., Ft. Leavenworth.
 Rivers, Wm. C., capt. 1 cav., Manila, P. I.
 Robe, Chas. F., brig. gen. ret., San Diego, Cal.
 Roberts, Hugh A., 1 lt. 8 cav., Ft. Riley.
 Roberts, T. A., capt. 7 cav., Camp Thomas, Ga.
 Roberts, Wm. M., 1 lt. M. D., Ft. Sill, Okla.
 Robertson, S. W., 2 lt. 15 cav., Ft. Ethan Allen.
 Rockenbach, S. D., capt. 12 cav., Manila, P. I.
 Rockwell, V. LaS., 1 lt. 11 cav., Ft. Des Moines.
 Rodgers, A., lt. col. 15 cav., Ft. Ethan Allen, Vt.
 Rodney, D. R., 2 lt. 5 cav., Ft. Apache, Ariz.
 Rodney, G. B., 1 lt. 5 cav., Ft. Leavenworth.
 Rodney, W. H., 2 lt. 1 cav., Ft. Clark, Tex.
 Roe, C. F., maj. gen., 280 Broadway, N. Y.
 Roome, B. R., lt., Pier 32 New E River, N. Y.
 Roscoe, David L., 2 lt. 1 cav., Ft. Clark, Tex.
 Rosenbaum, O. B., capt. 26 inf., Ft. Sam Houston, Tex.
 Ross, J. O., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Rothwell, T. A., 2 lt. 5 cav., Ft. DuChesne.
 Roudiez, Leon S., capt. q. m. dept., Minneapolis, Minn.
 Rowan, H., maj. art., Ft. Terry, N. Y.
 Rowell, M. W., capt. 11 cav., Manila, P. I.
 Rucker, Louis H., brig. gen. ret., Los Angeles.
 Ruggles, F. A., 2 lt. 9 cav., Ft. Myer, Va.
 Ruhien, G., lt. col. Q. M., Washington, D. C.
 Russell, E. K., maj. ret., Philadelphia.
 Russell, F. W., lt., Plymouth, N. H.
 Russell, Geo. M., 2 lt. 14 cav., Manila, P. I.
 Russell, G., maj. ret., Albany Hotel, Denver.
 Rutherford, S. McP., capt. 4 cav., Ft. Riley.
 Ryan, James A., capt. 15 cav., Ft. Myer, Va.
 Ryan, John P., capt. 6 cav., Ft. Leavenworth.
 Ryan, T. F., 1 lt. 11 cav., Ft. Sheridan, Ill.
 Sands, G. H., capt. 6 cav., Ft. Meade, S. Dak.
 Sargent, H. H., capt. 2 cav., College Sta. Tex.
 Sawtelle, C. G., jr., capt. 8 cav., Jefferson Bks.
 Saxton, Albert E., capt. 8 cav., West Point.
 Sayre, Farrand, capt. 8 cav., Ft. Sill, Okla.
 Sayre, R. H., lt. 9 E 40 st., New York.
 Schenck, A. D., lt. col. art. corps, Ft. Stevens, Oregon.
 Schermerhorn, F. E., capt., 1420 Chestnut st., Philadelphia.
 Seherer, L. C., capt. 4 cav., Ft. Leavenworth.
 Schofield, R. McCa., capt. Q. M. D. St. Paul.
 Schroeter, A. H., 2 lt. 6 cav., Ft. Meade, S. D.
 Schultz, Theo., 1 lt. 14 cav., Manila, P. I.

- Schuyler, Walter S., lt. col. 2 cav., Manila, P. I.
 Schwan, Theo., brig. gen. ret., Washington.
 Schwarzkopf, Olof, vetn. 3 cav., Ft. Assiniboine, Mont.
 Scott, Geo. L., maj. 10 cav., Onigum, Minn.
 Scott, Hugh L., maj. 14 cav., Manila, P. I.
 Scott, W. J., 1 lt. 10 cav., Ft. Robinson, Neb.
 Scott, W. S., capt. 1 cav. constabulary, Manila.
 Scott, W. S., capt. Q. M. D., Cheyenne, Wyo.
 Seosne, C. A., 1 lt. 3 cav., Ft. Yellowstone, Wyo.
 Service, S. W., vetn. 10 cav., Ft. Mackenzie, Wyo.
 Sharpe, H. G., col. sub. dept., Washington, D. C.
 Shelleys, J. E., 1 lt. 11 cav., Ft. Sheridan, Ill.
 Sheridan, M. V., brig. gen. ret., Washington.
 Sheridan, P. H., 2 lt. 5 cav., Ft. Huachuca.
 Shunk, Wm. A., maj. 8 cav., Ft. Riley.
 Sibley, F. W., maj. 2 cav., Manila, P. I.
 Sickel, H. G., maj. 12 cav., Manila, P. I.
 Sidman, F. E., 2 lt. 6 cav., Ft. Sill, Okla.
 Sievert, H. A., capt. 9 cav., Ft. Walla Walla.
 Sillman, Robt. H., 1 lt. 15 inf., Monterey, Cal.
 Sille, William G., capt. 1 cav., West Point.
 Simms, C. W., col., Ronceverte, Greenbrier Co. W. Virginia.
 Simpson, W. L., capt. 6 inf., Ft. Leavenworth.
 Simpson, W. S., capt., Bovina, Texas.
 Sirmyer, Edgar A., capt. 8 cav., Emerson, S. C.
 Slavens, T. H., capt. Q. M. D., Washington.
 Slocum, H. J., maj. 2 cav., Manila, P. I.
 Slocum, S. L. H., capt. 8 cav., Jefferson Bks, Mo.
 Small, Howard R., 2 lt. 2 cav., Manila, P. I.
 Smedberg, Wm. R., capt. ret., San Francisco.
 Smedberg, W. R., jr., capt. 14 cav., Manila, P. I.
 Smith, A. L., lt. col. sub. dep., Manila, P. I.
 Smith, Cornelius C., capt. 14 cav., Manila, P. I.
 Smith, Gilbert C., 1 lt. 2 cav., Manila, P. I.
 Smith, Harry R., col., Clarksburg, W. Va.
 Smith, M. C., capt. 14 cav., Manila, P. I.
 Smith, R. M., 1 lt. Philippine scouts, Manila.
 Smith, Selwyn D., 2 lt. 1 cav., Ft. Leavenworth.
 Smith, Talbot, 2 lt. 8 cav., Ft. Riley, Kan.
 Smith, Walter D., 2 lt. 11 cav., Ft. Des Moines, Iowa.
 Smith, Walter H., 2 lt. 13 cav., Manila, P. I.
 Somerville, Geo. R., 2 lt. 14 cav., Manila, P. I.
 Sproule, Wm. A., vetn. art., Ft. D. A. Russell.
 Stancilft, Ray J., vetn. 8 cav., Jefferson Bks.
 Starr, C. G., maj. inf., Governor's Island.
 Stedman, C. A., col. 5 cav., Ft. Huachuca, Ariz.
 Steele, Matt. F., capt. 6 cav., Ft. Leavenworth.
 Steever, Edgar Z., col. 4 cav., Ft. Riley, Kan.
 Stephenson, F., 2 lt. Porto Rico regt., Cayey.
 Sterling, E. K., 2 lt. 3 cav., Ft. Assiniboine.
 Sterrett, R., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Steunenburg, Geo., 1 lt. 13 cav., Manila, P. I.
 Stevens, Chas. J., capt. 2 cav., Manila, P. I.
 Stevenson, Wm. L., 2 lt. 11 cav., Jefferson Bks.
 Stewart, Cecil, capt. 4 cav., Portland, Oreg.
 Stewart, C. W., lt. 5 cav., Fort Grant, Ariz.
 Stewart, T. J., brig. gen., Harrisburg, Pa.
 Stiles, J. C., com. nav. bat., Brunswick, Ga.
 Stockle, Geo. E., capt. 8 cav., Jefferson Bks.
 Stodter, C. E., capt. 9 cav., Ft. Walla Walla.
 Stafford, F. W., 1 lt. art., Ft. Monroe, Va.
 Stott, Clarence A., 2 lt. 12 cav., Manila, P. I.
 Straub, Oscar I., capt. art., Ft. Leavenworth.
 Strong, F. S., capt. art., Orchard Lake, Mich.
 Strong, G., capt., 108 Dearborn st., Chicago.
 Stryker, Goss L., 2 lt. 6th cav., Ft. Meade, S. D.
 Sturges, Dexter, 1 lt. 13 cav., Manila, P. I.
 Sturges, Edw. A., 1 lt. 5 cav., Ft. Leavenworth.
 Sues, Geo. W., capt., Bee B'dg., Omaha, Neb.
 Sumner, S. S., maj. gen., Oklahoma City, Okla.
 Suplee, E. M., capt. 14 cav., Davenport, Ia.
 Swezey, C. B., capt. 13 cav., Manila, P. I.
 Swift, Eben, maj. A. G. D., Washington.
 Swift, Eben, jr., 1 lt. 11 cav., Jefferson Bks.
 Swigert, Samuel M., col. ret., San Francisco.
 Symington, John, 2 lt. 11 cav., Ft. Riley, Kan.
 Tate, Daniel L., capt. 3 cav., Boise Bks, Idaho.
 Tatum, H. C., 2 lt. 7th cav., Ft. Leavenworth.
 Taulbee, Joseph P., 2 lt. 2 cav., Manila, P. I.
 Taulbee, M. K., 1 lt. P. R., Cayey.
 Taylor, C. W., maj. 18 cav., St. Paul, Minn.
 Taylor, T. B., 1 lt. 11 cav., Jefferson Bks, Mo.
 Taylor, W. R., 1 lt. 8 cav., Ft. Assiniboine.
 Tempamy, J., vetn. 9 cav., Ft. Walla Walla.
 Terrell, H. S., 1 lt. 10 cav., Ft. Mackenzie, Wyo.
 Thayer, Arthur, capt. 8 cav., World's Fair, St. Louis.
 Thomas, C. O., jr., 1 lt. 1 cav., Manila, P. I.
 Thomas, Earl D., col. 11 cav., Ft. Des Moines.
 Tilford, J. D., 1 lt. 1 cav., Ft. Clark, Texas.
 Tompkins, C. H., col. ret., Westminster, Carroll Co., Md.
 Tompkins, D. D., 2 lt. 10 cav., Ft. Mackenzie.
 Tompkins, E. R., 1 lt. 11 cav., Jefferson Bks.
 Towar, Albert S., col. pay dept., Chicago.
 Towles, Churchill, maj., Houston, Tex.
 Townsend, C. C., capt., Greeley, Col.
 Townsend, P. C., Corsicana, Tex.
 Townshend, Orval P., capt. P. R., Cayey.
 Traub, Peter K., capt. 5 cav., West Point.
 Treat, Chas. G., capt. art. corps, West Point.
 Tremaine, Wm. C., 1 lt. 15 cav., Ft. Myer, Va.
 Tripp, S. O., lt. col., Peoria, Ill.
 Trippe, P. E., capt. 12 cav., Richmond, Va.
 Trout, Harry G., capt. 2 cav., Manila, P. I.
 Troxel, Orlando C., 2 lt. 12 cav., Manila, P. I.
 Tucker, W. F., lt. col. pay dept., Portland, Ore.
 Turner, Fred. G., 1 lt. 6 cav., Ft. Meade, S. Dak.
 Turnbull, W., 1 lt. M. D., Ft. Strong, Mass.
 Tuthill, A. M., capt., Morenci, Ariz.
 Tyner, Geo. P., 1 lt. 2 cav., Manila, P. I.
 Uri, J. H., vetn. 6 cav., Ft. Meade, S. D.
 Valentine, Wm. S., capt. 5 cav., Ft. Wingate.
 Vallant, R. D., 2 lt. 3 cav., Ft. Yellowstone.
 Van Deusen, G. W., capt. art., Manila.
 Van Leer, S., 1 lt. 15 cav., Ft. Myer, Va.
 Van Natta, T. F., jr., 2 lt. 8 cav., Fort Sill, O. T.
 Vans Agnew, R. S., vet. 5 cav., Ft. Apache, Ariz.
 Van Voorhis, D., 1 lt. 3 cav., Ft. Leavenworth.
 Varnum, C. A., maj. 7 cav., Camp Thomas, Ga.
 Vestal, S. P., capt. 7 cav., Silver City, N. M.
 Vidmer, Geo., capt. 11 cav., World's Fair Station, St. Louis.
 Viele, C. D., col. ret., Los Angeles, Cal.
 Vierra, F. M., lt., Salinas, Cal.
 Vroom, P. D., brig. gen. ret., care Hdqrs, San Francisco.
 Wade, James F., maj. gen., Manila, P. I.
 Wade, John P., capt. 2 cav., Manila, P. I.
 Wagner, A. L., col. a. g. dept., 22 Jackson Place, Washington, D. C.
 Wagner, H., lt. col. ret., 201 W. 43 st., N. Y. City.
 Waite, H. De H., 1 lt. ret., Berkeley, Cal.
 Walcutt, Chas. C., jr., capt. (cav.) qm. dept., Prescott, Ariz.
 Waldo, Rhineland, 1 lt. 17 inf., Manila, P. I.
 Walker, K. W., capt. 15 cav., Ft. Myer, Va.
 Walker, Kirby, capt. 14 cav., Manila, P. I.
 Walker, R. W., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Wallach, R. R., 1 lt. 3 cav., Ft. Assiniboine.
 Walsh, R. D., capt. 9 cav., Ft. Walla Walla.
 Wampold, L., capt., cor. Market and Jackson st., Chicago.
 Warburton, C. E., capt., 704 Chestnut st., Philadelphia.
 Ward, E. M., capt., 43 South street, New York.
 Ward, F. K., lt. col. 1 cav., Ft. Sam Houston.
 Warren, Rawson, 2 lt. 11 cav., Ft. Sheridan.
 Wassell, Wm. H., capt. 22 inf., Manila, P. I.
 Waterman, John C., capt. 7 cav., Grand Rapids.
 Watrous, J. A., maj. pay dept., Omaha, Neb.
 Watson, Jas. W., capt. 10 cav., New Orleans.
 Watson, J., 1 lt. 8 cav., Jefferson Bks, Mo.
 Watts, C. H., maj. 5 cav., Ft. Huachuca, Ariz.
 Wells, A. B., brig. gen. ret., Geneva, N. Y.
 Wells, B., capt., Tulleride, Col.
 Wesendorff, Max, capt. ret., Frankenhansen, Kyffhäuser, Germany.
 Wesson, Chas. M., 1 lt. 8 cav., West Point.
 West, E. S., 1 lt. 7 cav., Chickamauga Park, Ga.
 West, F., lt. col., insp. gen., Oklahoma City.
 West, P. W., capt. 11 cav., San Francisco.
 Westmoreland, Wade H., 2 lt. 11 cav., Fort Riley.
 Wetmore, W. B., maj., Allenhurst, N. J.

Weyrauch, Paul H., 2 lt. 14 cav., Manila, P. I.
 Wheatley, Wm. F., 2 lt. 5 cav., Whipple Bks.
 Wheeler, Fred, maj. ret., Berlin, Wis.
 Wheeler, H. W., maj. 11 cav., Ft. Sheridan.
 Whigam, W. H., capt. 38 Loomis st., Chicago.
 White, Geo. P., capt. (cav.) qm. dept. Presidio,
 San Francisco.
 White, H. A., capt. 11 cav., Ft. Des Moines.
 Whitehead, H. C., capt. 10 cav., Ft. Robinson.
 Whitesides, J. G., lt., 3rd floor Keith Bldg,
 Philadelphia, Pa.
 Whitlock, F. O., 1 lt. 14 cav., West Point.
 Whitman, W. M., capt. 13 cav., Manila, P. I.
 Whiteide, S. M., brig. gen. ret., Army and Navy
 Gen. Hosp., Hot Springs, Ark.
 Whitside, W. W., 1 lt. 15 cav., Ft. Myer, Va.
 Wieman, Henry, 176 Grove st., Brooklyn, N. Y.
 Wileu, John W., 1 lt. 13 cav., Manila, P. I.
 Williams, A. E., capt. 3 cav., Ft. Apache, Ariz.
 Williard, Harry O., capt. 5 cav., 16th and
 Dodge sts., Omaha, Neb.
 Wills, H. S., lt., 86 Allen St., Albany.
 Wilson, J. C., maj., 144 22 st., Chicago, Ill.
 Wilson, James H., brig. gen. ret., 1305 Rodney
 Ave. Wilmington, Del.
 Winans, E. B., jr., capt. 4 cav., Ft. Riley, Kan.
 Windsor, Henry, jr., Revere Copper Co., Bos-
 ton, Mass.
 Winfree, S. W., 2 lt. 9 cav., Wawona, Cal.
 Winham, F. W., capt., Salinas, Cal.
 Winn, John S., capt. 2 cav., Manila, P. I.
 Winnia, C. C., 1 lt. 5 cav., Ft. Huachuca.
 Wint, Theodore J., brig. gen., Omaha, Neb.
 Winter, J. G., jr., 2 lt. 6 cav., Ft. Meade, S. Dak.
 Winter, M. A., col., 339 Pennsylvania ave.,
 Washington, D. C.
 Winterburn, G. W., 1 lt. 9 cav., Fort Leaven-
 worth.
 Winters, Wm. H., 1 lt. 13 cav., Manila, P. I.
 Wise, H. D., capt. 9 inf., Madison Bks., N. Y.
 Wisser, J. P., maj. coast art., Ft. Miley, Cal.
 Wood, Edward E., col., West Point, N. Y.
 Wood, John P., lt., 5211 N 22d st., Philadelphia.
 Wood, Leonard, maj. gen., Manila, P. I.
 Wood, Robert E., 1 lt. 3 cav., West Point, N. Y.
 Wood, Thomas J., brig. gen. ret. (maj. gen.),
 121 N. Main st., Dayton, Ohio.
 Woodruff, Carle A., gen. ret., Raleigh, N. C.
 Woodruff, Charles A., brig. gen. ret., 2802 Van
 Ness ave., San Francisco, Cal.
 Woodruff, Wm. S., 1 lt. Porto Rico regt., Cayey.
 Woodward, Samuel L., lt. col. 7 cav., Camp
 Thomas.
 Wotherspoon, W. W., maj. 6 inf., Ft. Leaven-
 worth.
 Woude, A. J., 1 lt. 6 cav., Ft. Keogh, Mont.
 Wright, E. S., capt. 1 cav., Ft. Sam Houston.
 Wright, Wm. R., lt., 71 Leonard st., New York.
 Yates, A. W., capt. qm. dept., Portland, Me.
 Yates, Wm., capt. 14 cav., Laramie, Wyo.
 Young, E. C., col., Chicago.
 Young, Samuel B. M., lt. gen. ret., 25 E 60th
 st., New York City.
 Zane, Edmund L., 2 lt. 14 cav., Manila, P. I.
 Zell, Edward M., 2 lt. 7 cav., Camp Thomas.
 Zinn, George A., maj. eng., Wheeling, W. Va.

CAVALRY OF THE NATIONAL GUARD.

NOTE.—The following States and Territories have no mounted troops: Alaska, Dela-
 ware, District of Columbia, Florida, Indiana, Iowa, Kansas, Kentucky, Maine, Michigan,
 Minnesota, Montana, Nevada, North Carolina, North Dakota, West Virginia, Vermont.

Unless otherwise noted location of troop is address of officers of same organization.

ALABAMA

(Headquarters: Camden, Ala.)

Maj. James T. Beck
 Capt. A. G. Forbes, Adjutant, Montgomery
 Capt. Jno. F. Burns, Q. M., Burnsville
 Capt. L. L. Lasater, Commissary, Montgomery
 Capt. R. H. Kilpatrick, Surgeon

TROOP A—MONTGOMERY

Capt. W. O. Garside
 1st Lt. W. W. Walker
 2d Lt. Thos. Robinson
 Jr. 2d Lt. C. E. Dexter

TROOP B—CAMDEN

Capt. J. D. Jenkins
 1st Lt. O. J. Speer
 2d Lt. E. B. Tait
 Jr. 2d Lt. S. W. McIntosh

TROOP C—SEIMA

Capt. V. B. Atkins
 1st Lt. John S. Ford
 2d Lt. G. C. Phillips
 Jr. 2d Lt. J. P. Doherty

TROOP D—BIRMINGHAM

Capt. E. J. McCrossin
 1st Lt. C. S. Price
 2d Lt. C. H. Mondy
 Jr. 2d Lt. A. J. Hall

ARIZONA.

FIRST CAVALRY TROOP—NOGALES.

Capt. Charles E. Perkins
 1st Lt. Phil Herold.
 2d Lt. Emery L. Chalfant

SECOND CAVALRY TROOP—MORENCI.

Capt. A. M. Tuthill
1st Lt. James N. Purdum
2d Lt. Hugh F. McGouigle

ARKANSAS

Maj. M. C. House, Commanding, Panola
2d Lt. Jno. F. Reid, Adjutant, Panola

TROOP A—PANOLA

Capt. E. A. Howell
1st Lt. J. J. Brewer
2d Lt. J. E. Brown

CALIFORNIA

TROOP A—SAN FRANCISCO

Capt. Charles Jansen, 524 Washington St.
1st Lt. Chas. F. Wells, 315 Montgomery St.
2d Lt. Chas. M. Fickert, 530 Callifornia St.

TROOP B—SACRAMENTO

Capt. Sam'l W. Kay, 1113 Q St.
1st Lt. Oscar J. Boden, 520 M St.
2d Lt. Thomas S. Kelly, 1601 8th St.

TROOP C—SALINAS

Capt. Charles Fulle
1st Lt. Fred'k W. Wickham
2d Lt. F. M. Vierra

TROOP D—LOS ANGELES

Capt. Jno. D. Fredericks, Co Court House
1st Lt. A. C. Freeman, 805 Laugblin Block
2d Lt. Earl W. Jonas, 717 San Pedro St.

COLORADO

(Headquarters: Denver)

Maj. Zeph T. Hill, commanding
1st Lt. W. R. Eaton, Adjutant

TROOP A—TELLURIDE.

Capt. Bulkely Wells
1st Lt. John R. Galloway, Norwood
2d Lt. Louis C. Lomax

TROOP B—DENVER

Capt. ———
1st Lt. D. W. Strickland
2d Lt. Carleton A. Kelley

TROOP C—DENVER

Capt. H. D. Smith
1st Lt. C. S. Card
2d Lt. J. G. Dickinson

TROOP D—MEEKER

Capt. George L. Greer
1st Lt. George E. Alcher
2d Lt. Ambrose Oldland

CONNECTICUT

TROOP A—NEW HAVEN

Capt. Luzerne Ludington
1st Lt. William J. Bradnack
2d Lt. Robert J. Woodruff, Orange

GEORGIA

(Headquarters: Savannah)

Col. P. W. Meldrim, Savannah
Lt.-Col. Belrne Gordon, Savannah
Maj. B. T. Sinclair, Savannah
Maj. J. S. Dozier, Atlanta
Maj. W. P. Waite, Savannah

First Squadron

Capt. W. W. Gordon, Jr., Troop A, Savannah
Capt. A. G. Cassels, Troop B, McIntosh
Capt. C. F. Berry, Troop C, Springfield
Capt. E. J. Giles, Troop D, Reidsville

Second Squadron

Capt. J. W. Hughes, Troop E, Johnston Station
Capt. Gustavus Canning, Troop F, Gainesville
Capt. (vacant), Troop G, Darien
Troop H (vacant)

Third Squadron

Capt. H. W. Whaley, Troop I, Jesup
Capt. (vacant), Troop K, Augusta
Capt. Geo. M. Hope, Troop L, Atlanta
Troop M (vacant)

ILLINOIS

FIRST REGIMENT CAVALRY

(Headquarters: 196 Monroe St., Chicago)

Field and Staff

Col. Edward C. Young, 196 Monroe St.
Lt.-Col. Robert B. Fort, Lacon
Maj. Milton J. Foreman, 100 Washington St.
Maj. Joseph Wilson, 144 E 22d St.
Capt. Willis Counselman, Adj., La Salle and Jackson Sts.
Capt. Leo. Wampold, Q. M., Market and Jackson Sts.
Capt. Burnett Chipperfield, Commissary, Canton
Capt. Henry C. Cassidy, Insp. Rfl. Pret., 2205 Calumet Ave.
Maj. T. Jay Robeson, Surgeon, 3807 Grand Boulevard
Capt. Jesse Racone, Asst. Surg., Abingdon
1st Lt. Morton M. C. Inow, Asst. Surg. 4207 Grand Boulevard
1st Lt. Martin Peterson, Squadron Adjt. Chicago
1st Lt. Walter A. Rosenfield, Squadron Adjt. Rock Island
Capt. Stewart S. Paker, Veterinarian, 901 Jackson Boulevard
Capt. Rufus A. White, Chaplain, 6800 Perry Ave.

First Squadron

TROOP A—CHICAGO

Capt. Gordon Strong, 497 State St.
1st Lt. Gustav F. Wuerst
2d Lt. Joseph W. Mattes

TROOP B—BLOOMINGTON

Capt. Isaac F. Douglass, Shirley
1st Lt. Louie Foreman
2d Lt. Bert O. Trueiner

TROOP C—CHICAGO

Capt. F. S. Dunham, 424 E 48th St.
1st Lt. Albert E. Butler, 1732 Chicago Ave.
2d Lt. Ludwig T. Kuehl

TROOP D—SPRINGFIELD

Capt. John W. Vorhes, Riddle Hill
1st Lt. Harry L. Neer
2d Lt. Charles Walz

Second Squadron.

TROOP E—CHICAGO

Capt. Harry L. Daniels, 527 N. Clark St.

TROOP F—CHICAGO

Capt. Wallace H. Whigam, near Powers Bld.

1st Lt. _____
2d Lt. Warren W. Coffin

TROOP G—PEORIA

Capt. Frank N. Bush
1st Lt. Chas. J. Carlson
2d Lt. Gilbert L. Geign

TROOP H—MACOMB

Capt. E. Lewis Head
1st Lt. Frank M. Russell
2d Lt. Edmond F. Hanson

KENTUCKY

PINEVILLE CAVALRY.

Capt. H. J. Gibson
1st Lt. R. E. Samuel
2d Lt. Mott Lyen

LOUISIANA

FIRST TROOP—NEW ORLEANS

Capt. C. Robert Churchill, 407 Morris Bld.
1st Lt. Wm. S. Hero, 823 Commercial Place
2d Lt. Scudday Richardson, 1436 La. Avenue
Capt. Arthur Nolte, Surgeon, 1505 State St.

SECOND TROOP—MANSFIELD

Capt. Henry T. Liverman
1st Lt. R. W. Yarborough
2d Lt. Chas. W. Smith

THIRD TROOP—LAKE CHARLES

Capt. Joseph C. Leiben
1st Lt. S. Arthur Knapp, Jr.
2d Lt. Leland H. Moss

MARYLAND

TROOP A—PIKESVILLE

Capt. Joseph W. Shirley
1st Lt. C. Lyon Rogers, Jr.
2d Lt. J. L. Rodgers.

MASSACHUSETTS

(Headquarters: Jamaica Plain)

Maj. Wm. A. Perrins, commanding, Jamaica Plain
1st Lt. John W. Hall, Adj., Boston
1st Lt. John C. Kerrison, Q. M., Revere
Maj. Geo. Westgate Mills, Surgeon, Medford
1st Lt. Arthur W. May, Vet. Surg., Jamaica Plain
1st Lt. Alfred M. Blinn, Paymaster, Roxbury
1st Lt. Albert J. Walton, Inspector of Rifle Practice, Melrose

COMPANY A—BOSTON

Capt. Frank T. Hitchcock, Winthrop
1st Lt. Fred G. Havlin, Somerville
2d Lt. Wm. E. Housman

COMPANY D—BOSTON

Capt. Wm. H. Kelley
1st Lt. Eugene A. Coburn, Malden
2d Lt. Samuel T. Sinclair, Cambridge

COMPANY F—CHELMSFORD

Capt. John J. Monahan, West Chelmsford

NEBRASKA

TROOP A—SEWARD

Capt. _____
1st Lt. William S. Baldwin
2d Lt. Amos Thomas

SOUTH OMAHA CAVALRY—SOUTH OMAHA

Capt. Bruce McCulloch
1st Lt. Harry E. Tagg
2d Lt. James H. Duncanson

NEW YORK

Squadron A (Three Troops)

Headquarters: Madison Ave. and 94th St.
New York City)

Maj. Oliver B. Bridgmen
1st Lt. Robert C. Lawrence, Adjt.
1st Lt. John M. Gallaway, Q. M.
1st Lt. Louis V. O'Donohue, Commissary of Subsistence
1st Lt. Reginald H. Sayre, Insp., of Small Arms Pract.
Asst. Surgs. Capt. Medwin Leale and Russell Bellamy
1st Lt. George H. Davison, Vet. Surg.
Chaplain David Parker Morgan

TROOP 1

Capt. Edward M. Ward
1st Lt. Merritt H. Smith
2d Lt. Max de Motte Marsellus

TROOP 2

Capt. Howard G. Badgley
1st Lt. Francis C. Huntington
2d Lt. George B. Agnew

TROOP 3

Capt. Herbert Barry
1st Lt. Stowe Phelps
2d Lt. Wm. R. Wright

TROOP B—ALBANY

(State Armory, Lark and Elk Sts.)

Capt. Harry S. Richmond
1st Lt. Ernest L. Miller
2d Lt. Harry S. Wills.

TROOP C—BROOKLYN

(North Portland Ave. and Auburn Place)

Capt. Charles I. DeBevoise
1st Lt. James C. McLeer
1st Lt. Edward McLeer
2d Lt. Paul Grout
2d Lt. George J. Morgan

NEW HAMPSHIRE

TROOP A—PETERSBOROUGH

Capt. Chas. P. Davis
1st Lt. Chas. H. Dutton, Hancock
2d Lt. Clifford Gowing

NEW JERSEY

FIRST TROOP—NEWARK

Capt. Wm. A. Bryant, Montclair
1st Lt. Cortland Parker, Jr.
2d Lt. Bertram R. Roome, Arlington

SECOND TROOP—RED BANK

Capt. Edward Field
1st Lt. Frederick W. Hope
2d Lt. Howard Whitfield

NEW MEXICO

(Headquarters: Las Vegas, N. M.)

Maj. R. C. Rankin, commanding
1st Lt. R. H. Gross, Adj.
2d Lt. R. C. Reid, Q. M.-Commissary

TROOP A—LAS VEGAS

Capt. A. P. Tarkington
1st Lt. Edward J. McWenle
2d Lt. Ludwig Wm. Ilfeld

OHIO

TROOP A—CLEVELAND

Capt. Wm. M. Scofield
1st Lt. John E. Morley
2d Lt. Otto Miller

TROOP B—COLUMBUS

Capt. John J. Baird
1st Lt. Robert D. Falmer
2d Lt. Ben W. Chamberlain

OREGON

TROOP A—LEBANON

Capt. Edgar L. Power
1st Lt. Harry A. Elkins
2d Lt. George L. Fry

PENNSYLVANIA

FIRST BRIGADE

Philadelphia City Cavalry

FIRST TROOP

(Armory 23d St. above Chestnut

Capt. John C. Groome
1st Lt. J. Franklin McFadden
2d Lt. J. Willis Martin
Cornet, William E. Bates, Merlon

SECOND TROOP

(Armory 23d and Chestnuts Sts.)

Capt. Frank Earle Schermerhorn
1st Lt. John P. Wood
2d Lt. Charles Welsh Edmunds
1st Lt. and Asst. Surg. W. A. Newman Dorland, 120 S. 17th St.
2d Lt. and Q. M. Randolph Sailer

TROOP A

(Armory N. 41st and Mantua Ave.)

Capt. Barclay H. Warburton
1st Lt. Norman MacLeod
1st Lt. Albert Sidney Rambo
2d Lt. John Garrett Whitesides
2d Lt. and Q. M. Parker Ross Grubb

SECOND BRIGADE

SHERIDAN TROOP

(Armory: Tyrone)

Capt. C. S. W. Jones
1st Lt. Luther Fleck Crawford
2d Lt. Harry S. Fleck
2d Lt. and Q. M. Robert A. Zentmyer, Spruce Creek

THIRD BRIGADE

GOVERNOR'S TROOP

(Armory: Harrisburg

Capt. Frederick M. Ott
1st Lt. Charles P. Meck
2d Lt. John M. Major
2d Lt. and Q. M. Edgar C. Hummel

RHODE ISLAND

(Headquarters: Pawtucket)

Maj. William A. Maynard, Providence, Commanding
1st Lt. Leo F. Nadeau, Adjt., Providence
Maj. Charles F. Sweet, Surg., Pawtucket
1st Lt. Lucius H. Newell, Q. M., Pawtucket
1st Lt. Henry D. C. Dubria, Commissary, Providence
1st Lt. Edward M. Holmes, Paymaster, Central Falls
1st Lt. Joseph J. Woolley, Chaplain, Pawtucket

TROOP A—PAWTUCKET

Capt. Charles Allenson, Central Falls
1st Lt. P. Henry McKenna, Valley Falls
2d Lt. John T. McAuley, Lonsdale

TROOP B—PROVIDENCE

Capt. John J. Richards
1st Lt. Joseph A. Crowshaw
2d Lt. Frank P. Droney

SOUTH CAROLINA

(Headquarters: Georgetown)

Col. J. R. Sparkman, Georgetown
Maj. S. A. Marvin, White Hall
Maj. W. T. Ellerbe, Jordanville
Capt. J. W. Doar, Adj., Georgetown
Capt. F. H. McMaster, Q. M., Charleston
Maj. M. W. Pyatt, Judge Advocate, Georgetown
Maj. Olin Sawyer, Surgeon, Georgetown
Maj. A. M. Brailsford, Jr., Paymaster, Mullins
Lt. J. D. West, Bat. Adj., Locaster
Lt. G. M. Ellerbe, Bat. Adj., Jordanville
Sergt.-Maj. Holmes B. Springs, Georgetown

TROOP A—EDGEFIELD

Capt. N. G. Evans
1st Lt. H. L. Bunch
2d Lt. John M. Mays
Add. 2d Lt. T. J. Williams

TROOP B—EDISTO ISLAND

Capt. M. M. Seabrook
1st Lt. G. F. Seabrook, James Island
2d Lt. G. D. Oswald, James Island

TROOP C—PANOLA

Capt. H. B. Richardson
1st Lt. P. B. Harvin
2d Lt. D. E. Holladay
Add. 2d Lt. J. Q. Mathis

TROOP D—PAXVILLE

Capt. A. J. Richbourg, St. Paul
 1st Lt. J. D. Hoyle, Paxville
 2d Lt. B. W. Des Champs, Pinewood
 Add. 2d Lt. B. R. Hodge, Tindal

TROOP E—HENDESONVILLE

Capt. John P. Slattery, White Hall
 1st Lt. E. A. Marvin, White Hall
 2d Lt. G. E. H. Moore
 Add. 2d Lt. S. S. Marvin

TROOP G—GEORGETOWN

Capt. H. T. McDonald
 1st Lt. Maham W. Fyatt
 2d Lt. Miles Bellune
 Add. 2d Lt. John J. Johnson

TROOP H—ECTAWVILLE

Capt. R. G. Causey
 1st Lt. T. F. Jackson
 2d Lt. T. J. Hart
 Add. Lt. L. L. Thomas

TROOP I—BARREL LANDING

Capt. R. G. W. Bryan, Levy
 1st Lt. J. Dan Crosby, Levy
 2d Lt. P. D. Hubbard, Levy

TROOP K—SAMPIT

Capt. B. O. Bourne
 1st Lt. D. N. Bourne
 2d Lt. W. S. McDonald

TROOP L—CONWAY

Capt. D. A. Spivey
 1st Lt. Charles J. Epps
 2d Lt. S. C. Long

SOUTH DAKOTA

(Headquarters: Watertown)

Major Cyrus C. Carpenter, Watertown
 Lt. J. F. Armstrong, Adjt., Faulkton
 Lt. Harry G. Boocock, Asst. Q. M., Faulkton

TROOP B—PIERRE

Capt. Samuel Logan
 1st Lt. W. C. Notmeyer
 2d Lt. Oscar Nelson

TROOP C—WATERTOWN

Capt. Frank E. Munger
 1st Lt. A. T. Hopkins
 2d Lt. Frank L. Bramble

TENNESSEE

TROOP A—NASHVILLE

Capt. George F. Hagar
 1st Lt. W. F. Hardin
 2d Lt. W. G. Bush

TROOP B—CHATTANOOGA

Capt. J. P. Fyffe
 1st Lt. R. S. Sharp
 2d Lt. W. J. Nixon

TROOP C—TULLAHOMA

Capt. Jonathan H. Tripp
 1st Lt. Thomas R. Bean
 2d Lt. Joel W. Chitwood

TEXAS

(Headquarters: Houston)

Major Churchill Towles, Houston
 1st Lt. Paul J. Blackmon, Adjt., Corsicana
 2d Lt. Claude C. Cunningham, Q. M., Beaumont
 Chaplain Walker K. Lloyd, Paris

TROOP A—HOUSTON

Capt. Ira D. Davis
 1st Lt. G. H. Winkler
 2d Lt. M. C. Wellborn

TROOP B—ANARILLO

Capt. W. H. Ingerton
 1st Lt. John S. McKnight
 2d Lt. Frank Douglas

TROOP C—AUSTIN

Capt. W. H. Younger
 1st Lt. D. D. Smyth
 2d Lt. Frank Corwin

TROOP D—CORSIANA

Capt. W. H. Murphy
 1st Lt. C. C. Cunningham
 2d Lt. J. F. Cullinan

UTAH

TROOP A—SALT LAKE CITY

Capt. _____
 1st Lt. Earl V. Smith, Commanding
 2d Lt. Albion W. Caine

VIRGINIA

TROOP B—SURRY

Capt. Henry C. Land
 1st Lt. Aurelius W. Bohannon
 2d Lieut. Robert E. Fergusson, Norfolk, Va.

WASHINGTON

TROOP B—TACOMA

Capt. Everett G. Griggs
 1st Lt. Marcus C. Davis
 2d Lt. H. U. Palmer

WYOMING

ONE TROOP—CHEYENNE

Capt. Robert LaFontaine
 1st Lt. George Gregory
 2d Lt. Thomas Myatt

WISCONSIN

TROOP A—MILWAUKEE

Capt. Robert W. Mueller
 1st Lt. Wm. J. Classen
 2d Lt. Fred H. Coe



Publisher's Notices.

MERCHANT & CO., LTD.

The death of Clarke Merchant, formerly Lieutenant Commander United States Navy, occurred on Saturday, May 7th, at his home in Philadelphia, Pennsylvania. The deceased was founder and president of the well known Philadelphia firm of Merchant & Company, Limited, manufacturers of high grade roofing tin and the Star ventilators, largely used in our modern barracks

MOUNT TAMALPAIS MILITARY ACADEMY.

The JOURNAL acknowledges the receipt of a very handsomely gotten up prospectus of Mount Tamalpais Military Academy of San Rafael, California. A glance through its pages, which contain many excellent reproductions of its buildings, the grounds and scenes, is almost equivalent to an actual visit to this well known institution. For several years Captain M. A. Batson has been attached to the academy as military instructor and Sergeant Thomas J. Fansing, a retired soldier of the cavalry arm, is the instructor in horsemanship. The official reports upon this institution are among the very best. "There is no institution for training boys in a preparatory course for college superior to it," says the Inspector General of the army. Army officers will do well in noting this before placing their sons. Headmaster Arthur Crosby will be pleased to furnish all the information desired.

JOHN MORRELL & CO., LTD.

At Ottumwa, Iowa, is located the great packing plant of John Morrell & Co., limited. Its brand of "Iowa Pride" has a reputation for delicious flavor. The firm is prepared especially for discriminating buyers who desire the best grade that can be secured. This firm has branch houses in many of the large cities of the United States. Commanding officers should see to it that these goods are kept on hand for garrison trade.

CODE PORTWOOD CANNING CO.

Among the Pacific Coast canning companies none stand higher in the estimation of the trade than the Code Portwood Canning Co. "By their fruits ye shall know them," is the firm's motto, and is well applied. Its canned goods are largely used on the Coast, and a fair share of their business is done with the army and navy. It deserves it.

THE GEO. B. PECK DRY GOODS CO.

The Geo. B. Peck Dry Goods Company of Kansas City has established a reputation that easily places it second to none among the great firms in the West. As is well stated by the company in its advertisement, its rapid growth is due to the system established for the purchase of its stock and the corps of representatives maintained at the firm's expense at all foreign points where manufactures and fashion must be closely observed, that the trade at home may have the benefit of the latest line of goods made and new fashions to appear. The Geo. B. Peck Dry Goods Company is well known in army circles, and their patrons always appreciate its efforts to please them. The JOURNAL is pleased to make this reference to the firm, for it deserves well of all who have dealt with it.

THE E. L. ANDERSON DISTILLING CO.

The E. L. Anderson Distilling Co., of Newport, is among the manufacturers in its line that stands at the very top of

whiskey producers who do a mail order business. A good share of it finds its way into the army. "We have been well and favorably known among the officers of the army and navy for years," is a statement made in its advertisement which the JOURNAL is pleased to carry.

C. L. KNAPP & CO.

The JOURNAL is pleased to call attention to C. L. Knapp & Co., of Leavenworth, who do an extensive business both as wholesalers and retailers in china and glassware. This firm is among the largest importers in this section, and is one of the leaders among the many handsome stores of which Leavenworth has reason to boast.

RICHARDSON & BOYNTON.

No introduction is needed to the Warm-air furnaces and cooking ranges used so extensively in the army and supplied by Richardson & Boynton, of New York and Chicago. Constructing quartermasters should not fail to send to one of these two houses for a descriptive catalogue, which the firm is ready to supply. It is the universal expression among those who have used the furnaces and ranges that they give general satisfaction.

BITTMANN-TODD GROCER CO.

Leavenworth's leader among her wholesale grocers is the Bittmann-Todd Grocer Company. It is among the oldest grocery firms on the Missouri River. It has had, in its time, immense transactions with the commissary department of the army amounting to millions of dollars. Its very high standing in trade circles, and particularly among army men, is proof of the high character of the men who have in the past and do at present manage this great establishment. Its trade in the army is still very large, and is likely to continue so long as its honorable business methods are maintained.

FRANK MILLER'S HARNESS DRESSING.

Frank Miller's Harness Dressing is recognized by cavalry and artillery men as the best material for "getting a shine on" the saddles and harness. It is in general use among mounted men in the army, and by the teamsters in the

quartermaster's department, who take pride in keeping up the harness so that the team driven by them may make a good appearance, is evidence of its popularity.

BRUNSWICK-BALKE-COLLENDER CO.

The Brunswick-Balke-Collender Co., who are known the world over for the standard billiard and pool tables it manufactures, can find its product in almost every troop, battery and company amusement rooms. Of the twenty-five organizations at Fort Leavenworth there is not one without it, and several have two of their tables. The company keeps one man employed here looking after these tables and making repairs that may be found necessary. To give satisfaction is its first desire.

MEXICAN AMOLE SOAP CO.

The man behind the gun heads an advertisement of the Mexican Amole Soap Company, of Peoria, Illinois. Its shaving cream is the soldier's friend because of its handiness for field use. Army barbers find it to be of prime quality. Its Diamond King Soap established a reputation during the Spanish War among troops who were fortunate to be able to make use of it. It possesses not only thorough cleansing, but healing qualities as well. The same company also manufactures shampoo of extraordinary merit, and army men, particularly barbers, will do well to secure these excellent articles.

MEHLBACH SADDLE CO.

Cavalrymen need no introduction to the Whitman saddles, manufactured by the Mehlbach Co., of 106 Chambers Street, New York. They have been tried in hard fields and always found easy for the rider. This company manufactures many specialties for the horseman, and is commended to cavalry officers. At Fort Leavenworth fifty Whitman saddles are in use by the student officers.

SHAEFFER BROS. & PARNELL MANUFACTURING CO.

A pure red oil laundry soap, made according to requirements of the government, finds in the subsistence department a frequent purchaser of large quantities. It is of ex-

cellent quality and a thorough renovator for uniform clothing. It is manufactured by Shaeffer Bros. & Parnell Manufacturing Company, of St. Louis. The company deserves the army patronage for the high quality of its product.

KASPER OATS CLEANER.

A distinguished cavalry officer writes that the Kasper Oats Cleaner, advertised in the JOURNAL, should be in use in every horse and mule stable in the army. It so thoroughly removes dirt, weed, seeds and all foreign matter as to enable the hostler with but very little trouble to give the animal under his charge "clean oats," and clean oats means well-conditioned horses and mules. Officers in charge of public animals should communicate with the firm as to prices. When you write refer to the JOURNAL.

THE HUDSON-KIMBERLY PUBLISHING Co., KANSAS CITY,

Is among the leaders of American publications, particularly of military text books. In this field they are second to none in the United States. In the army they are well known and are rapidly extending their trade among the National Guard, where there is a great demand for text books and such publications as will assist in showing the way to professional advancement.

COLTS PATENT ARMS MFG. CO.

To say anything about the arms manufactured by the Colts Company, of Hartford, Connecticut, in the way of commendation is like adding fuel to the flames. The reputation of this firm is so thoroughly established, and its product so well known among army men, that anything the JOURNAL may say for this firm would give it no higher place in the estimation of those who have used Colts arms. It is a thoroughly American institution, and every American is, of course, proud of its name.

RUDOLPH WURLITZER CO.

To be the purveyors to the army, navy, marine corps, National Guard and military colleges for every article in the music line is a distinction but few music houses in the coun-

try can claim. The Rudolph Wurlitzer Company of Cincinnati is one of such firms, and came to the title because it deserved it. Army musicians have long recognized this music company as leaders. Much of their business comes from every section of the army and musical organizations of other branches of the public defense. Their reputation for square dealing has given them a standing among the musical houses of the country that those who do a mail order business always recognize. If you want a catalogue of what The Rudolph Wurlitzer Company can supply you, send for one. The address is found at the bottom of its advertisement in this JOURNAL.

SAML DODSWORTH BOOK CO.

Among the oldest firms in the Missouri Valley, the Saml Dodsworth Book Company of Leavenworth easily leads. It was established nearly fifty years ago, and is managed to-day by the third generation in direct succession. Its business covers several States. As blank book manufacturers they have tickled the fancy of thousands of government clerks, having supplied the departments for almost the entire period of its existence. As book binders they are excelled by none, and stand at the very top in the matter of low prices.

KOKEN BARBER SUPPLY CO.

A first class barber shop in a troop, battery or company is one of the adjuncts desired by every commander. If managed by a first class barber, which most commanders prefer, only first class furniture will be found in such shops. The prime need of a well regulated shop is a good chair. Many of them are known to be supplied with "Koken's Chair of the Day." It is strong, simply constructed, and exclusive in design. The Koken Barber Supply Company is ready to supply the needs of every barber shop. The firm is well known throughout the army and will be pleased to furnish you a handsome catalogue.

RICHARD SPRINGE, LEAVENWORTH.

The establishment of the General Service and Staff College compelled many Leavenworth firms to make a specialty

of military equipments to meet the requirement of the two hundred and more officers stationed at Fort Leavenworth, and among these Richard Springe easily has the lead. He will quote you prices on application and fill orders for any station within the continental limits of the United States or the islands.

GEO. A. BAYLE.

Geo. A. Bayle, of St. Louis, is a maker of high grade food products, and its quality is the test of its cheapness. These food products are largely used in the army through the commissary department. Special attention is called to the new advertisement in this issue for Bayle's "Original Horseradish Mustard." It makes "eating a great pleasure." Mr. Bayle solicits correspondence, and it is hoped our post exchange officers will avail themselves of this invitation.

DEIMEL LINEN-MESH CO.

The JOURNAL is informed that the Deimel Linen-Mesh Co. had an attractive exhibit at the American Medical Association meeting at Atlantic City in June. Dr. Deimel underwear is deservedly popular with the physician, who knows that the linen-mesh is a delight to the skin and that its absorbent qualities quickly remove all bodily moisture, giving a perpetual feeling of cleanliness and comfort.

JOHN G. HAAS.

John G. Haas, the army tailor, with headquarters at Lancaster, Pa., and a branch at Washington, D. C., has first place in the heart of every officer who appreciates a fitting uniform. Mr. Haas, from a very small beginning has succeeded in building up for himself a reputation among army officers for excellence in workmanship and fair dealings, a distinction any man or firm may feel proud to possess.

S. T. SMITH COMPANY.

The S. T. Smith Company, of New York, whose removal from No. 10 Park Place to No. 11 Barclay Street is announced in this issue of the JOURNAL, supplies the old reliable "Diamond" brand typewriter ribbons and carbon papers. In fact, anything in the line of supplies for typewriters is made

a specialty by this firm, and if you write them they will be pleased to send you one of their New Century catalogues.

CHASE & SANBORN.

Chase & Sanborn, importers of coffee, are established in Boston, Chicago and Montreal. Their Seal Brand coffee is well known in the army, where it has a well established reputation. The firm does an immense business in both army and navy circles.

HENRY ETTENSON & SONS DRY GOODS CO.

The largest department store in Kansas is at Leavenworth, known as the Henry Ettenson & Sons Dry Goods Company. During the past twenty years this firm has done an immense business with army people, and make a specialty of catering to the military. Mail orders from any section of the United States are solicited.

C. A. LAMMERS BOTTLING CO.

Troops stationed in Colorado, Wyoming, Utah and New Mexico are staunch patrons of the C. A. Lammers Bottling Company, who are exclusive bottlers for the Ph. Zang Brewing Company of Denver, Colorado. The product of this brewery has a well established reputation and trade once secured is always retained by the firm.

WOOLFE & WINNIG.

Leavenworth boasts of several handsome department stores. Among the recent acquisitions is the firm of Woolfe & Winnig. Army people have been able to find within this department store about everything they desire. Its prices are reasonable and all patrons receive equal treatment. The firm seeks mail orders from any point in America, and will consider favorably applications by officers to open accounts.

W. & L. E. GURLEY.

Transits, levels, compasses, plane tables, etc., in fact any article desired by civil engineers and surveyors is manufactured by W. & L. E. Gurley, of Troy, N. Y. This firm has been doing business since 1845, and is well known through-

out the army. It will furnish estimates and illustrated catalogues on application.

F. R. RICE MERCANTILE CO.

A post exchange store without a "Mercantile," manufactured by the F. R. Rice Mercantile Cigar Company of Saint Louis, in stock, is incomplete. The "Mercantile" is a favorite among those who are judges of a good smoke, and these should not be deprived of the best when the brand can be so easily secured.

SANDFORD & SANDFORD.

No. 176 Fifth Avenue, New York, is the headquarters of the prince of merchant tailoring firms of Sandford & Sandford. This firm is very moderate in its prices and makes every effort to please its patrons. If you are in New York and passing down Fifth Avenue, don't fail to pay the gentlemen a visit. You will receive a hearty welcome, whether you leave an order or not. Remember the number—176 Fifth Avenue.

THE SCHMELZER ARMS CO.

The Schmelzer Arms Company of Kansas City is the leader in sporting lines west of New York. A visit to its establishment will be proof of this assertion. Its managers possess the vim so characteristic of Kansas City's business men, and who have placed their city in the front rank of commercial centers. The Schmelzer Company makes special prices to army officers and post exchanges, and solicits their trade. Officers in charge of post gymnasiums will do well to write them before purchasing elsewhere.

HATFIELD & SONS.

Established 1833. This is the claim made by Hatfield & Sons, army tailors. This firm grows with age. It has just been compelled to move into larger quarters, by removing from 389 Fifth Avenue to 450 Fifth Avenue. Hatfield & Sons are importers of their own goods, and their uniforms are always acceptable to their many patrons. The quality is what counts in uniforms, and the name of Hatfield is a guaranty of quality.

"HAPPY THOUGHT" GARMENT HANGERS.

To provide a convenient, inexpensive and efficient device by which a man's clothing may be kept free from wrinkles, "bagging," etc., is indeed a happy thought. This has been accomplished to a most satisfactory degree by the Happy Thought Hanger Co., of Sparta, Wisconsin. Perhaps no one more than a soldier, especially a cavalryman, will appreciate this ingenious device. Both coat and trousers hangers are made of nickel-plated steel wire and are compact, light and efficient. By their use the crease is preserved in the trousers and "bagging" at the knees and wrinkling of the cloth are prevented. The coat hanger is adjustable and telescopes together, occupying little space when not in use, and by their use the uniform is kept in most perfect order. They weigh but a few ounces, and occupy so little space that they are transported without inconvenience. Their use will contribute much to the appearance of the possessor, and they cost but a trifle. They are already in use by many of the officers and men in the army and navy, as well as in the militia, and in many instances whole companies have provided themselves with these hangers, and in every instance purchasers have expressed themselves as much pleased with them. Every officer will appreciate their value, whether used for his own uniforms or by his men in their barracks. They are indeed a "Happy Thought."

CARL HOFFMAN MUSIC CO.

The Carl Hoffman Music Co., of Kansas City, Mo., is one of the oldest established houses in the West. Mr. Hoffman was in business for many years at Leavenworth, and closely identified in business with army people. He understands their needs in the music line, and any order sent the house by mail receives prompt and careful attention.

CASPER COMPANY.

Made by honest "Tar Heel" farmers and aged in the mellow sunshine. Read the adv. of the Casper Co. in another column.



HON. WM. H. TAFT,
SECRETARY OF WAR.





HON. W. H. B. L. C.
SECRETARY OF W. A. K.

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AN INCIDENT OF THE YELLOWSTONE EXPEDITION OF 1873.

ABOUT 8 o'clock in the morning of August 11, 1873, on the north bank of the Yellowstone River in Montana, in a spirited fight between eight troops of the Seventh Cavalry under General George A. Custer and Sioux Indians, Lieutenant Charles Braden, of this regiment, was shot through the upper left thigh. The bullet, from a Henry rifle, fired at a range of not over fifty yards, went clear through the leg, badly shattering the bone and splitting it down to the knee. The Lieutenant was dismounted and walking with his right side towards the Indians. The left leg was in the air when struck and as the wounded man fell, his weight coming on the broken bone, caused the ends to pass each other and stick into the flesh, making a very ugly wound. One of the sergeants with his detachment wore a long black silk scarf. This he took off and tied it as tight as he could around the leg above the wound.

Lieutenant Braden's detachment numbered about twenty men of L Troop, and was an advanced guard about a mile ahead of the main command. The detachment met a large number of mounted Indians, but succeeded in holding its

position until several troops of the regiment arrived and drove off the Indians, pursuing them some distance up the valley.

Lieutenant, now Commissary General Weston, rode to where Braden lay, unstrapped an extra blanket from his saddle and left four men and a bugler to take charge of the wounded man, ordering them to put him in the blanket and take him to where Custer had established his headquarters. The bugler was to lead the horses and carry the carbines of the four soldiers, who carefully put Braden in the blanket, and each carrying at one corner, started for the field hospital.

It was necessary to go across several large ravines, and up and down hills. The bugler, who became scared, could not manage his extra horses and carry the four carbines, disappeared. This left the party unarmed. Then one of the contract doctors with the expedition appeared and said the Indians were coming back, and the carrying party had better hurry or they would all be killed. This message greatly accelerated the pace, and the party went as rapidly as possible. Some patches of cactus had to be crossed; the prickles were long, dry and brittle.

For a few minutes the men carrying the blanket were able to keep it from touching the ground, but they soon became tired and the injured man frequently hit the cactus. Many of the prickles went through the blanket into the flesh and broke off. It seemed as if every square inch of his anatomy that had come into contact with the cactus had at least a hundred of such broken spears. They afterwards were the cause of much pain and suffering.

After awhile the party reached headquarters. Dr. Ruger, brother of General Ruger, U. S. A., retired, pulled the pieces of bone out of the flesh and made the patient as comfortable as possible. There were no appliances to dress such a wound, and there was nothing to do but wait for the wagon train to arrive, which it did about sundown.

Dr. James P. Kimball, U. S. A., recently deceased, was the chief medical officer of the expedition. There were no splints or plaster bandages in the medical wagon, so the doctors, aided by a blacksmith and a carpenter, having obtained

a few pieces of boards by breaking up some boxes used for commissary stores, made a trough long enough to hold the entire leg. The trough, or box, was open at the top; across the bottom was fastened a tourniquet, which held two strips of adhesive plaster, about three inches wide, fastened one on the inside and the other on the outside of the leg, and extending up to where the bone was broken. On the left side of the box was screwed an iron rod, reaching along the body and bent at the shoulder so as to pass under the neck. Two other strips of adhesive plaster, about the same width as those used below the break, were put on the leg. One of these strips was stuck to the front of the body and the other to the back, and both were fastened to the iron rod under the neck. The object of these strips was to hold the leg in place and keep the ends of the broken bone from rubbing against each other, and to prevent, if possible, shortening of the leg. Before these strips of adhesive plaster were applied, the leg and body were shaved so that a better hold could be had by the plasters. It is unnecessary to say that the pulling in opposite directions of these strips was not one of the pleasant sensations to which humanity is sometimes treated. A cushion of tow and cotton was made for the box, and the leg, prepared as above described, consigned to what many said would be its last little bed.

The work of making the box and setting the injured leg was done after dark. The only light was from candles held by soldiers, and was very poor. The doctors said that the pain of setting the broken bone would probably be intense as no anesthetic could be given because none was on hand.

Two officers (one, Lieutenant, now Colonel Godfrey, the other's name cannot be recalled now) were asked to hold the patient's hands so as to keep his finger nails from being sunk into the flesh.

A majority of the five medical officers present favored amputation. Dr. Kimball told the wounded man the result of their consultation, saying that in either case the chances to survive the long journey ahead would be about equal if the leg was cut off or left on. The patient decided to keep his leg.

It was realized by everyone that the task of carrying such a severely wounded man was going to be serious. The expedition could not be delayed on his account. He, with the other wounded, could not be left behind with a small guard, for the command was not to return by the route it was to go. General Custer proposed that a raft of dry cottonwood logs be built and the wounded man, with two men as escort, be floated on it down the Yellowstone River to the nearest post, Fort Buford. The distance was about two hundred and fifty miles, and it was calculated that the current would carry the raft about four miles an hour. The floating was to be done by night, and during the day the raft was to be concealed in the bushes. Lieutenant Benjamin H. Hodgson, Seventh Cavalry, a classmate, afterwards killed in the Little Big Horn fight, asked to go along as one of the attendants.

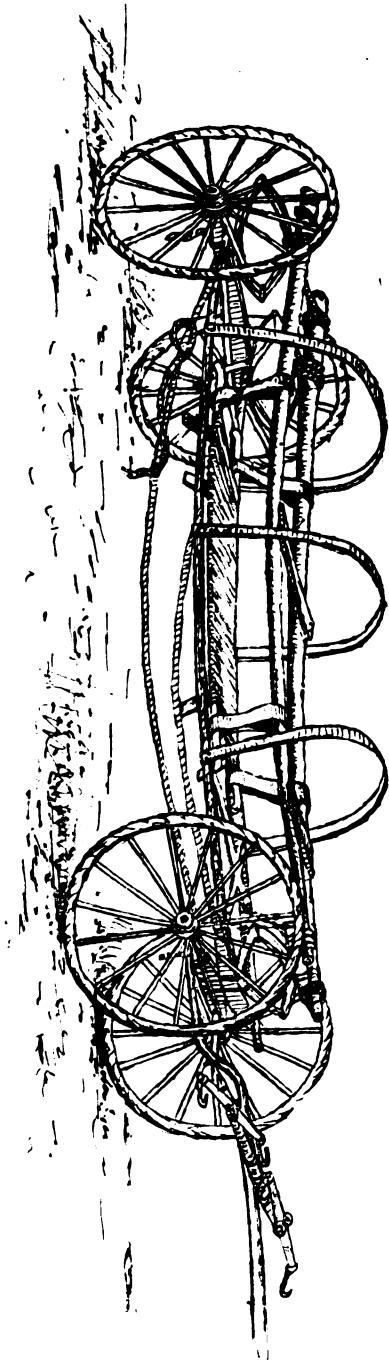
The scheme was not approved by General Stanley, commander of the expedition, for various reasons. One of his characteristic remarks was that it would be more humane to shoot Braden at once rather than have him captured en route by the Indians or have his raft wrecked and he be drowned in the Buffalo Rapids, which were a short distance above the mouth of Powder River.

When the expedition moved out the morning after the fight the wounded officer, with a soldier who had a broken arm, was put in an ambulance.

In order to get the benefit of a beaten road the ambulance was to travel after the wagon train. The jolting of the ambulance was simply awful; the soldier with the broken arm got out and walked. After going about ten miles the doctor reported to the commanding officer that Braden was rapidly losing strength and could not last much longer, so the expedition halted and went into camp.

The next day a new plan was tried. It was proposed to carry him on a stretcher. He was put on one, and at first two men carried it. Each pair carried the stretcher till they were tired, when two others relieved them. Progress was slow, fatiguing to the men, and very uncomfortable to the occupant of the stretcher, who had no protection from the broiling sun. After going three or four miles in about five

IMPROVISED STRETCHER FOR LIEUTENANT BRADEN.



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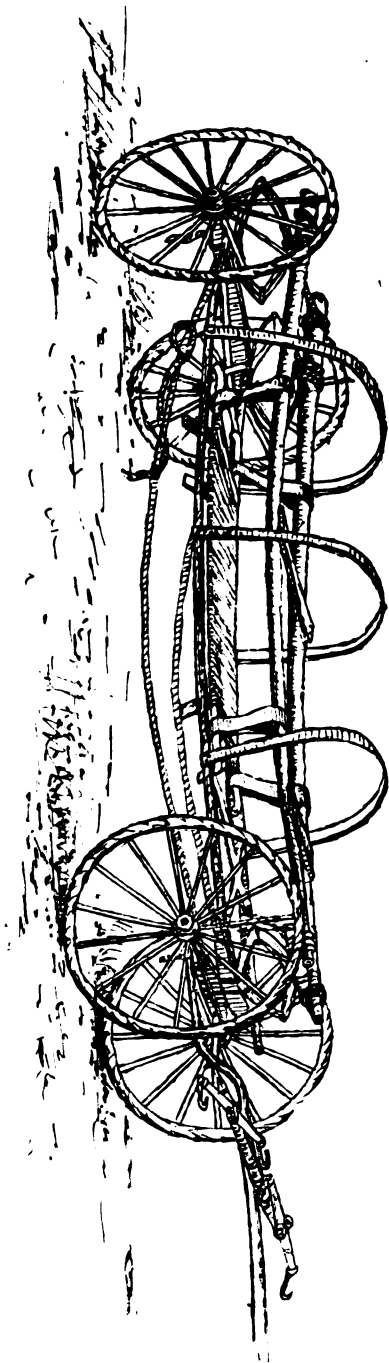
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hours, the carriers were exhausted and camp was pitched. It was seen that this plan was a failure and suggestions were in order. The wagon-master proposed to rig up a conveyance and was told to go ahead. He used the running gear of an ambulance, took out the reaches and cut two small cottonwood poles about six inches in diameter and thirty feet long. The ends of the poles were securely fastened to the springs of the ambulance. Four slings, made of rawhide, were attached to the poles. Into these slings were inserted the handles of the stretcher. The slings were of such a length and so placed that the stretcher hung in the middle of the conveyance about eighteen inches above the ground. Wagon bows were fastened to the poles and over these bows was placed a canvas wagon cover to keep off rain and sun. The conveyance looked much like what are sometimes, in the country, called "stone-boats," where a low platform hangs from the body of the wagon.

The wheels of the rig were wrapped with hide. The object of this was to widen the surface so that the vehicle would run more easily. Wide tires would have been a great improvement, but the rawhide wrapping was not a success. It was all right while the hide was soft and pliable, but when it became dry and hard there was an uneven surface to the wheels which caused jolting.

On the underside of the stretcher boards were nailed so that the canvas could not sag. A thin mattress was put on the stretcher and on this the invalid lay. The next morning, when all was ready for the start, the handles of the stretcher were inserted in the slings and Lieutenant Braden was strapped to the stretcher so that he could not fall off. Two mules were hitched on, the driver riding one of them. When the mules started or stopped there was an unpleasant jerk, and the patient would have been thrown off had he not been tied fast. He did not mind the swaying of the stretcher from side to side but the longitudinal motion was unpleasant, for at every stop or start there was a jerk which seemed to make the ends of the broken bone rub together and caused intense pain. After the first day's trip it was seen

that the conveyance, with a few changes, would work very well.

Ropes were run from the handles of the stretcher to the opposite axles so as to prevent the longitudinal swing; a stick was nailed across the poles in such a position that Braden could hold on to it. The mules were given up and the wagon was hauled by men. A detail of thirty cavalrymen and three non-commissioned officers was sent, and at Lieutenant Braden's request, Lieutenant Smallwood, Ninth Infantry, a classmate at West Point, was detailed to take charge of the outfit. The detachment was divided into three reliefs of ten men and a corporal or sergeant. The reliefs were changed every hour. Ropes were fastened along both sides of the vehicle and to the tongue. One man walked alongside each wheel; two were at the end of the tongue to guide, and four others pulled at the rope.

The duty of the men at the wheels was to ease them over ruts or stones in the path. The change of motive power from mules to men was a great improvement, for the wagon was started and stopped without any jerking or jolting.

In order to have as good a road as possible, the outfit was made to follow the wagon train. A hospital steward and several attendants accompanied the party. About every half hour he inspected the condition of the patient. The steward was provided with a keg of water and stimulants, and occasionally gave a small quantity of brandy and water. When Braden became weak and exhausted, word to that effect was sent ahead to General Stanley and he always stopped for the day at the next good camping place. At first about one and a half miles an hour could be made under average conditions. One annoyance which could not be avoided, was the dust which was thrown up in quantities by the wheels and covered the stretcher and its occupant.

As the party moved along some wag remarked that the thing resembled the hook and ladder truck of a village fire department.

The command marched faster than the men could drag the conveyance, so the escort was usually from one to several hours late in reaching camp. Braden's tent was always

ready upon arrival, and the stretcher was lifted from its place and put on the ground, where it remained till the next day's march began.

The trip, for the first two weeks especially, was a severe and trying ordeal. No one expected Braden to live from day to day. On the eighth day the march was long, hot and dusty. It was nearly dark when his party reached camp. He was so covered with dust that his features could not be distinguished. A number of officers and men were waiting for him.

Dr. Kimball took hold of his wrist and said, "I can't feel a thing. I guess he is dead."

The report spread that Braden had died and preparations were commenced to make a coffin for him out of a wagon box.

After a couple of weeks the ends of the broken bone had begun to knit and mules were again put to the conveyance, but the four men were kept at the wheels till the journey's end.

It was frequently necessary to ford streams. When this happened one of the men would wade across first. If the water did not reach higher than a certain part of his legs, the conveyance would be dragged over, the bottom of the stretcher sometimes just skimming the water. If the water was too deep, the stretcher was taken out and six men carried it over on their shoulders.

Lieutenant Braden was hauled in this conveyance for twenty-eight days and in it traveled about four hundred miles, as measured by the odometer.

The last day's journey was on the 10th of September, when the reserve camp at Glendive, Montana, was reached. After remaining there some days the sick and wounded were put aboard the steamer *Josephine* for a trip down the Yellowstone and Missouri Rivers. The water in both was so low that the boat spent more time on sandbars than in motion, and it was early in October before Fort Lincoln was reached.

The leg was taken out of the box and the adhesive straps were removed sixty-two days after the fight. It was a long time to be in one position. During the trip, with no proper nourishment, the body became greatly emaciated, and the

flesh in several places was worn down to the bone, causing bad sores. To add to the discomfort, the cactus prickles above mentioned caused ugly little ulcers, which festered. The patient could not be turned over, and in order to attend to these sores, he was held up by six strong men, and the doctor, from underneath the raised body, dressed the ulcerations and put on collodion with a camel's hair brush. It felt like hot coals as the liquid touched the raw flesh.

Several incidents, perhaps worth relating, occurred during the long and awful journey. Two soldiers, one a Holland Dutchman named DeGeer, and an Irishman named Keegan, were detailed to attend Braden. Their tent was always adjoining his, and he could distinctly hear their conversation, and is probably one of very few persons who have listened to the details of their own funerals. One night, about the third or fourth day, when he seemed to be weakening rapidly, he heard Keegan say: "Well, when the Lieutenant dies he will have a dacent funeral. He won't be sewed up in a bag as were Honsinger and Ballaran, but he is going to have a real coffin made out of a wagon box. It has all been arranged." Honsinger, the veterinary surgeon, and Ballaran a post trader with the expedition, were killed by the Indians on August 4th. Their bodies were recovered before the Indians mutilated them; the red-skins had rifled the pockets of the dead men, but were chased away before they could do any scalping. The remains were sewed in canvas and carried one day before being buried. This was done to keep the location of their graves from the Indians, who would undoubtedly have dug up the bodies. They were buried at sundown the night after they were killed. A picket line was put over the burial place and the next morning the entire wagon train passed over it, completely obliterating every sign of a grave.

Keegan and DeGeer were fluent talkers, and their conversation and arguments was the source of much amusement to the wounded officer. The poor, faithful fellows did not attend his "dacent funeral" as they expected to do, but were, it is believed, afterwards killed in the "Custer massacre."

One day an early camp was made near "Pompey's Pil-

lar." Several hundred of the men were in the river and others were washing clothes. Suddenly a small party of Indians, concealed in the bushes across the river, opened fire. The bathers lost no time in getting out of the water. It was a ludicrous sight to see the men, some carrying their clothes, scurrying for camp. Fortunately no one was hit. The Indians quickly mounted their ponies and scampered off before any of our men could shoot at them.

One night Braden's tent was pitched on a patch of dried grass. Early next morning (reveille was at three, breakfast about four, and the advance at five every day) when the striker came into the tent with breakfast, he put his candle on the ground. The candle tipped over and set fire to the grass. The blaze was noticed at once by Braden, who used his lungs to such good advantage that in less than a minute fifty men or more were there. They cut the tent ropes, threw down the tent, and stamped out the fire. It was a narrow escape for the helpless man.

The last day of the eventful journey was on the 10th of September, just thirty days after the fight. The steamboat *Josephine* was in sight, and the end of a tedious journey was within an hour of its close. Suddenly the mules hitched to the conveyance started to run, and ran a mile before they could be stopped. In crossing some patches of cactus, the hoofs had knocked off some dry pieces; a number of these had hit the bellies of the animals and the pain caused a stampede. No damage was done, but imagine the feelings of the helpless occupant of the wagon, who expected an upset, or a breakdown, when the promised haven of rest was so near.

Dr. Kimball took personal charge of Lieutenant Braden's case. He was taken from the regiment and kept with the headquarters of the expedition. About ten days before Glendive was reached, on the return trip, the Seventh Cavalry, under Custer, was directed to cut loose from the main column and take a short route to Glendive, through the "Bad Lands." The infantry with the wagon train was to go where it was known they would have a good trail.

An exceedingly pretty and thoughtful incident happened the day Custer separated from the main command. It may

best be described by the following extract from a letter written by him to Mrs. Custer, and published in her book entitled "Boots and Saddles." * * * "Our mess continues to be successful. Nearly every day we have something nice to send to Lieutenant Braden. Only think of him with his shattered thigh, having to trail over a rough country for three hundred miles! He is not transported in an ambulance, but a long stretcher arranged on wheels about thirty feet apart, pulled and pushed by men on foot. They carry him much more steadily than would horses or mules. It requires a full company of men each day to transport Mr. Braden in this way. He is with the main command, but was doing well when we left. The day the command divided I had the band take a position near the route where the rest of the expedition would pass, and when he and his escort approached they struck up 'Garryowen.' He acknowledged the attention as well as he could."

The acknowledgment consisted of reaching out under the cover and waving a handkerchief.

All of the officers of the Seventh Cavalry assembled to greet their wounded comrade and wish him a safe and pleasant journey. The day Custer left the main column it turned toward the Yellowstone River. The march continued till after dark. No water was found, so a dry camp had to be made. Only a few tents were pitched and the mules were not unharnessed. Some miscreant stole Braden's water keg. It was a contemptible thing to do under the circumstances, and he would have fared badly, with no water to bathe the inflamed wound, had not a small quantity of this necessary liquid been husbanded by the hospital steward. The thief had he been known, would have been roughly treated by the attendants.

General Custer had taken his cook, a colored woman named Eliza, along. Late at night, the day of the fight, while the doctors were busy dressing the wound Eliza came to the tent. She brought a *lemon*, saying it was the last one left in the General's mess, and that it would do Mr. Braden more good than any one else. Kind-hearted Eliza! it surely was a very thoughtful act on her part.

Afterwards, whenever the cavalry camp was near headquarters, Eliza always made some good nourishing soup and sent it over. Had it not been for her kindness Braden might have starved.

Captain Andrew Burt, Ninth Infantry, now Brigadier General, retired, was with the expedition. He was a great hunter, and whenever he succeeded in getting some game, always sent a generous share to Braden. Another gentleman to whom Braden was indebted for a number of kind acts was a Mr. Barron, correspondent of the New York *Tribune*. Mr. Barron is, it is believed, now a clergyman and editor of a religious journal published in Boston.

Upon arriving at Fort Lincoln Lieutenant Braden was taken to the post hospital, a ramshackle, wooden structure, situated on the high bluff where the infantry post was located. The only ward was occupied by enlisted men, so Braden was taken to the attic where there was no heat. Through holes in the roof the stars could be seen at night and the sky in the day time. Between the rafters, where they rested on the frame, was an open space. The place was cold, extremely desolate and dreary.

A few days after being put into this attic, a driving snow storm came up during the night. By morning several inches of snow had drifted in through the openings, and it covered Braden's bed with a shroud-like mantle. He was then taken down stairs and his bed placed in the dispensary. There was some warmth there from an old stove, but it was not a pleasant place for an invalid, as it was also the doctor's office, and sick call was held there.

When wounded he weighed about 180 pounds. After being able to hobble on crutches, the commissary scales at Lincoln showed his weight to be only 125.

Could Braden have been taken to a hospital soon after the fight, he might have recovered with quiet and proper care, but the wound completely disabled and unfitted him for further active service. He was subsequently retired as a first lieutenant. The leg became shortened nearly two inches and partially stiff at the knee, but part of the knee stiffness was probably due to an accident at West Point six months

before graduation, when a horse fell with him in the riding hall and injured the knee-cap. For eight years there were two running sores on the leg, from which, before final healing, thirteen pieces of bone, several chips of lead, and fragments of clothing were taken. An X-ray picture made at West Point some years ago shows that many more pieces of bone never came out, but were caught in the callous that formed around the ends of the broken bone.



OUR CAVALRY.

BY MAJOR JOSEPH A. GASTON, FIRST CAVALRY.

FROM the earliest times horses have been used for war purposes, and whether they have been driven in the chariots of the ancient Egyptians or Romans, or ridden by knights or cavalrymen of later days, the horse has always proved an important weapon when in the hands of those who knew how to use him to the best advantage.

From time to time, with improved arms, it has been contended that the days of cavalry were gone. This opinion was scarcely formulated, ere up rose some genius in his line and proved to the world that he had grasped the changed conditions, and that the mounted soldier was then, as he had always been, a necessity to any army. To-day the cavalry is the only arm of the service which can stand alone. The artillery needs a support from one of the other branches. The infantry needs the cavalry to do its reconnoitering, while the cavalry goes anywhere—everywhere—alone, and is prepared to face anything except possibly a balloon or a warship.

When our Civil War was being fought European powers were surprised to learn that cavalry, North and South, was fighting dismounted as infantry or charging mounted as cavalry, indifferent as to which they were called upon to do. The cavalry charges of Winchester, Gettysburg and elsewhere show that they were cavalry in the old sense of that word, while Sheridan's cavalry passing Lee's army on its retreat in 1865, taking post dismounted in its front and holding Lee until the arrival of the infantry, shows what dismounted modern cavalry can do. Sheridan and Stuart startled the world by their raids. The damage done by those raids can scarcely be estimated.

To-day the lessons taught by our Civil War are accepted

abroad at their true worth, and the campaigns of 1861-5, as well as those of Napoleon, are studied in their schools and cited as object lessons in war.

The German cavalry in 1870 were the eyes and ears of that army. The French knew nothing of the enemy, while the Germans were kept constantly informed.

Against the Indians on the plains, or in the mountains of New Mexico or Arizona, it was the cavalry which was called upon to do the work. On the plains, because the infantry could not keep up, and in the mountains, strange to say, for the same reason.

In our recent Spanish War, the cavalry was given no chance. Owing to the lack of transportation, the horses could not be taken to Cuba. Well drilled troops were few in number. The cavalry could not be left behind and willingly went dismounted and fought as infantry. Their record at San Juan Hill is engraved in the hearts of their countrymen.

After the Spanish War the necessity for cavalry in Cuba and the Philippines was soon recognized. In the former, to preserve, in the latter to compel peace. The horses were transported with some difficulty and at great expense. At first our American horses did not seem to be able to do their work, but it was soon learned that by clipping the horses and allowing them time to become acclimated and accustomed to the food products of the tropics, they were prepared to do their work there as well as in the temperate zone. The cavalry in Cuba policed the island and did excellent service. In the Philippines, in active warfare against the natives, whether in the mountains or in the rice fields of the valleys, they performed distinguished and invaluable service, and added another laurel to those already won by the American cavalry.

But little use of cavalry has been made in United States for street fighting, but it has been extensively used abroad. A charge of cavalry with sabers drawn frequently dispersing a mob, and thus preventing the necessity of using fire arms and the unnecessary, but consequent slaughter of the innocent as well as the guilty.

The equipment of modern cavalry is a very important question. Our cavalry should be prepared to meet the best cavalry the world affords, and our equipment should be of the best. In the opinion of the writer many improvements could be made. Our bridle and bit could both be improved. The blanket is excellent. The saddle is not nearly equal to the best stock saddles in the shape of the tree and should have what the stock saddle has, the double cinch, higher arch of the pommel, and a rough surface under the side bars to prevent the saddle from slipping.

The arms should be the carbine, pistol and saber, as at present. The new Springfield is said to be an excellent gun, and as the same gun is to be used by both infantry and cavalry, it will place an infantryman and a cavalryman on an equal footing as far as the effect of fire is concerned.

The caliber of our pistol is entirely too small and should be sighted for short ranges only. The saber should be sharpened and carried in a scabbard which would not make any noise nor destroy the edge of the blade. No bright metallic surfaces should be allowed in cavalry equipments.

Our pistol holster is not equal to those used by the cowboys of the plains. In addition, in order to supplement our fire, it is recommended that a machine gun be assigned to each squadron of cavalry. The Hotchkiss and Maxim are the most highly spoken of.

A modern cavalryman should be almost equal to anything. In addition to his regular duties of screening his army and fighting both mounted and dismounted, our cavalrymen have at times been called upon to demolish obstructions, make roads, build bridges, or perhaps act as disbursing officers or governors of large provinces, or perhaps to shoe a horse; signal a ship, use a telegraph line, or perhaps minister to the wants of a sick or wounded comrade or horse in the absence of the medical department, or even to build a bake oven. For the cavalry soldier to learn to ride his horse, and to properly care for his horse and himself, to properly use his arms, perform outpost and reconnoitering duty, learn signalling—rough sketching and how to make reports—the rules of military hygiene and all the various

details of guard duty, drills, both mounted and dismounted, and the customs of the service, takes years of constant service. It is a very expensive experiment in men, horses and money, to use volunteers for cavalry duty in time of war. Volunteer cavalry may be of great assistance. At the best is only mounted infantry, and can not take the place of well organized cavalry. In order to have good cavalry when a war breaks out, it is necessary to keep it up in time of peace. It is not possible to organize it on the outbreak of war. Hence its proportion in time of peace should be large. When war breaks out, well trained infantry is a necessity, but raw recruits can be much sooner drilled into shape for infantry than they can for cavalry.

• The infantry at the outbreak of war can be very largely increased, but cavalry can not, and while a troop of cavalry can be quickly filled up to its maximum strength, each old soldier has his time fully occupied in instructing the new men. A troop of cavalry thus reorganized is incapable of breaking up into small detachments and performing the full duty that is expected of good cavalry.

Raw cavalry cannot be expected to properly perform full cavalry duty. Aside from its lack of knowledge it lacks discipline. Our regular cavalry gradually weeds out undesirable men and thoroughly disciplines the rest. License spreads rapidly among undisciplined soldiers in time of war, and an undisciplined cavalry regiment in front of our army in time of war might and probably would, cause untold suffering among non-combatants, to the discredit of our arms and our reputation as a civilized nation.

The question then arises how much cavalry should our army have in time of peace. The only answer is, as many as the country can afford. While on this subject it may be well to note that General U. S. Grant found that his force of artillery obstructed the roads and he sent back to Washington all he thought he could spare. He kept his cavalry and infantry, and would undoubtedly have been glad of any increase of either of those arms.

The necessity for large bodies of cavalry on our Indian frontier no longer exists, and those not necessary on our

frontier, or in the Philippines, could more profitably be kept in the vicinity of our large cities.

By keeping cavalry on the frontier, its cost to the government is much greater on account of railroad freight bills for forage and other supplies. Railroads keep their surplus cars in the yards of large towns. Troops near those centers can be moved much more expeditiously than those farther away. Our present policy of quartering troops near large cities is undoubtedly the correct one. In 1885, on the outbreak of the Apache war, similar orders were wired at the same time to Fort Clark and San Antonio, Texas, for cavalry to proceed by rail to Deming, New Mexico. The troops from San Antonio reached Deming one day sooner than the Fort Clark troops, although they had about 140 miles farther to travel.

To meet changed conditions, many questions arise from time to time concerning improvements in the arms and equipments, and some person should be held responsible for the condition of such an important and expensive arm of the service as the cavalry. For these reasons our cavalry should have its own head in the War Department to be known as the chief of cavalry. To him should be referred all questions concerning the cavalry, and in a joint conference with the chief of artillery, and the chief of infantry, who should also be appointed, all questions concerning the line of the army could be settled for the best interests of the service.

A cavalryman of the best type is essentially a man of action, quick to grasp a situation and equally so to act. He is full of *esprit de corps*, has a high sense of honor and duty, and his enthusiasm is only held in check by a well tempered discretion and judgment.

In the appointment of a chief of such a body of men, the greatest care should be exercised. Only one who has had long and meritorious service in the cavalry, and who thoroughly understands its capabilities and necessities, should be deemed worthy of such an exalted position.

To such a chief our cavalry would at all times be ready to respond, and show by its deeds that it was prepared to live up to the glorious traditions of its past.

FIVE YEARS A DRAGOON, ('49 TO '54) AND OTHER ADVENTURES ON THE GREAT PLAINS.

PART IV.

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ON the second day of July, 1854, headquarters First Dragoons, "B" and "D" Troops, with a large number of army officers, some families, a large supply train and 600 extra horses led on strings of about forty horses each, left Fort Leavenworth for Fort Union, New Mexico, Colonel Thomas T. Fauntleroy commanding.

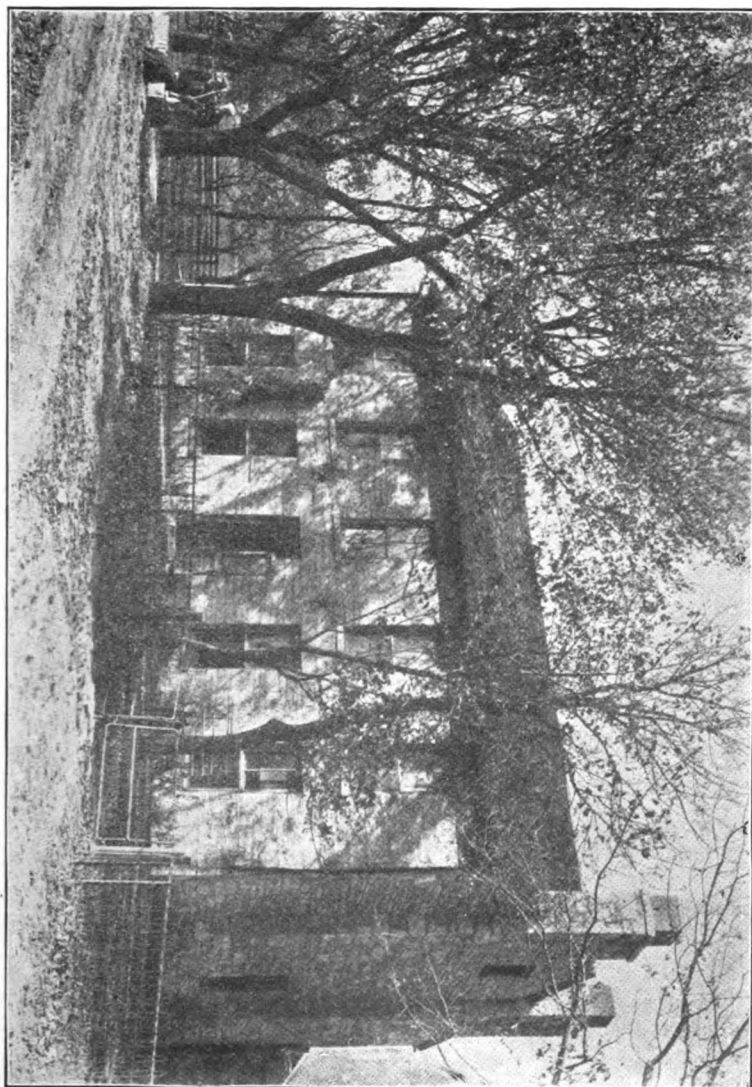
From start to finish, the two troops alternated daily in front and rear guard. During my experience I had never campaigned with another troop, hence did not know very much about the management of other troops on the plains and I learned to think "B" nearly as perfect as the conditions permitted. I was as proud of it as I ever have been of anything under my immediate charge. On every hand the troop attracted attention—the manner of marching, care taken of their horses, appearance of horses and men, the short time necessary to put up their tents, and the lightning speed with which they were struck, folded and loaded in the wagons, the neatness and dispatch in everything, and the quietness and lack of confusion on every hand, seemed a wonder to many of the officers of long experience. There was no special effort on this trip more than on others, but somehow we were settled down to one way of doing—a uniformity of thought and action—changes were few and only when circumstances forced them. Officers and noncommissioned officers did not have to reiterate from day to day and from camp to camp, for no man could plead ignorance of a general routine, hence there was little friction; the men had grown into the habit of taking pride in doing everything,

having "some style about them," as McDonald used to say, and every man had grown to know that he must do his share cheerfully, all working together for the general good.

"D" Troop was composed of a fine lot of men and drilled well, but they had been stationed for some years at Fort Snelling, and did not have the long summer campaigns that B had, and for that reason were not up to the daily routine of making themselves comfortable. Most of the men were comparatively new to campaigning, and while fine garrison soldiers, had much to learn and to suffer before they could hope to compete with men who had traveled from 1,500 to 3,000 miles every summer, always in an Indian country, always on the alert and obliged to move with little transportation, little or no forage save the grass that grew in abundance everywhere, and with short rations, depending largely on game which was also generally abundant. Of course, more or less recruits were received every winter (generally fore part of winter) from Carlisle Barracks to replace those discharged, etc. These recruits had special attention in drill, and imagined they were full fledged soldiers by the time we went on the plains, but soon found that half was not learned.

A good deal can be done to discipline men in garrison; but in the field, on the march, in bivouac under the blue sky, in storms, cold and heat, on the trail, caring for self and horses, with always a helping hand for comrades, bearing cheerfully every hardship, there was where the thorough dragoon was made, and a man in his first year's service was not worth half as much as in after years. This applies to a troop where three-fourths of the men were "old soldiers," which includes all men after the first year. This being true, how about a troop or company where there is not more than half a dozen who have seen service before? Take the experience of any man who has served in the regulars and volunteers. See the amount of sickness in the latter compared to the former; see the difference between strict discipline and the reverse; see the comfort of one against the suffering of the other under trying circumstances; see the difference between men who accept their instructions as iron-

KAW INDIAN MISSION AT COUNCIL GROVE. ERECTED IN 1860.



clad law, never doubting the correctness thereof, and men who argue the point in their minds, if not aloud, the instructor himself in doubt, lacking confidence in himself and the men he addresses—"the blind leading the blind." To hear the rabble, and politicians in particular, talk of how "our brave volunteers" performed such and such feats in battle, one would think the regular army did not amount to anything, and were only a stumbling block in the way of the "gallant men" of this or that State. Who ever doubted the courage of any respectable American—the peer of any man on earth? Surely, not I. But how can a man know anything until he has learned it? Is there any sense in marching young men, after a few months of camp life, into battle against disciplined troops? It won't do to tell us they are brave. Who doubted that? The fact that he is brave does not make his adversary less brave nor his aim less accurate. To stand up and receive the death blow because too ignorant to avoid it, may be admirable, but it is pitiable, and no credit to the nation that places men in such a position. No country on earth has superior material for soldiers, but it is no credit to the United States to expect this material to be transformed from peaceful pursuits to military experts in a few months to meet the stern necessities of battle.

Some one may point to the performance of the First Volunteer Cavalry ("Rough Riders") at Santiago to prove that the very best work was done by that regiment. Such comparison is no criterion. Nine-tenths of them were men who had lived for years in the field, in the mountains, on the plains, accustomed for years to Indian warfare; the best shots and the best horsemen in the world; accustomed to follow the trail and protect themselves and their property everywhere. Turned loose anywhere, singly or in squads, they were self-supporting. Even that portion of the regiment which came from the colleges and society circles of New York were remarkable for athletic accomplishments of all kinds, including target practice. Probably there is not on record an organization of similar numbers where each individual was so nearly self-made and self-reliant as this. The Colonel had distinguished himself as an Indian follower and

fighter in the regular army in Arizona and Mexico as few men ever did, and the Lieutenant Colonel from boyhood up had trained himself in every line of athletics; had ranched with the cowboys of Dakota, Wyoming and Montana, and was the champion hunter of big game in the United States. In his experience in public life he had learned human nature in every grade, and above all, at the age of most complete manhood—not too old for strength and energy nor too young for mature judgment—had learned self-control and the management of men. With their superb courage and patriotism, no wonder Colonel Wood and Lieutenant Colonel Roosevelt led that magnificent band of men, equal to those who died with Crockett at the Alamo, to glorious victory. It will not do to compare this regiment with average volunteers. Every man was a soldier, tried in a school than which there is no better in America. But the officers and men of this regiment will ever stand in respectful acknowledgment of the grand old regulars, who were shoulder to shoulder with them, and without which there would have been few of the "Rough Riders" left to tell the tale. Dogged, stubborn discipline came in time to mingle with desperate gallantry at the crucial moment. Young America, I honor your courage and manhood, but keep your eye on the regulars, and when you want to be a soldier enlist in a good company, in a good regiment, and go to a home where order and decency prevail, and every well behaved man finds peace and comfort.

Of course there was the usual confusion of starting a big caravan on a long journey, but things improved from day to day. Our troop had easy times compared to other organizations. After passing Council Grove, guards were doubled, as they always were on the route west, always expecting depredations of some kind from the Indians if the utmost vigilance was not maintained.

On Coon Creek, now in Edwards county, we met Kiowa Indians in great numbers, mounted on fine horses. They cavorted about us, saucy, insolent and defiant, in fact it looked like trouble was inevitable. "B" was advance guard, and as we were strung out on the road, "D" was more than two miles in rear. Our horses on strings were a great temp-

tation to the Indians, and they could have charged in and stampeded the whole lot with little loss to themselves. Colonel Fauntleroy was riding with Major Chilton and other officers ahead of me, as I rode at the head of the troop, and I heard the conversation. I saw that the Colonel and the Major were disagreeing, and finally the Major lost his temper and said with some spirit, "Well, if I were in command I would corral these trains and horses and wipe these Kiowas off the face of the earth; this is no way to deal with Indians." In answer the Colonel ordered the Major in arrest and to the rear. The Major turned, his eyes flashing, his bristling mustache looking unusually fierce, and rode to the rear. He had taken his last ride in front of his troop. Lieutenant Hastings was detached from the troop, acting commissary officer, hence, when the major was arrested there was no officer left in command of it. The Major had been consulted all along about camps, and had been of great service. Immediately after his arrest, the Colonel called me and said he wanted to go into camp. It was about 11 o'clock. I told him he could not find a better camp than about where he was, where the town of Kinsley now is, and at his order I rode off to assist the quartermaster, Captain Mastin, to arrange the camp. To the troop I gave the order, "Dismount! Graze your horses!" The Colonel looked surprised, but said nothing. I was carrying out a standing rule to rest and graze the horses at every opportunity. I was an hour with the quartermaster, during which time the troop were enjoying the finest grass on the plains.

This camp was made more compact than any we had heretofore, and the guard considerably strengthened. It was but a few miles from the old battle ground.

I reported to the Major after retreat and guard mount for any suggestions he might desire to make. Evidently he felt chagrined at the position he was placed in, and anxious that whatever happened his troop should not be found wanting. While we were talking, Lieutenant Robert Williams called and stated to the Major that he had been detailed to take command of his troop. He had called to pay his respects and to learn from the Major anything he desired to



FAMOUS KAW CHIEFS.

Al-le-gu-wa-be.

Wah-ti-an-guh.

Kah-he-gu-wa-ti-an-guh, known as the "Fool Chief."

impart concerning it. The Major thanked him and said about as follows: "This is Sergeant Lowe, Lieutenant Williams. He has been first sergeant more than two years, knows all about the troop, and will certainly serve under you as faithfully and cheerfully as he has under me. I congratulate you on being detailed to command my troop. You will not be likely to have any trouble with it." Lieutenant Williams commanded the troop two days, when Lieutenant Hastings took command. Lieutenant Williams was one of the best specimens of manhood that I ever met. Nothing ruffled the even tenor of his ways; he always spoke in the same gentle tone, the same perfect English, in the same refined manner. I conceived a friendship for him that a more intimate acquaintance in future years increased to admiration. He was one of the most refined and noble characters I ever knew. His military service ended with his retirement as Adjutant-General of the Army in 1893 on account of age.

On leaving the Coon Creek camp we moved out in double column, troops traveling by fours, wagons and horse strings two abreast. The rear guard furnished a line of vedettes along the bluffs, and orders were strict to keep everything closed up. A few days later we crossed the Arkansas at Cimarron Crossing, thirty miles above where now stands Dodge City, and camped on the south bank. We seemed to have left the Indians all behind, twenty miles below, and the talk that the Colonel had with them the evening before indicated no trouble.

The camp was west of the road, extending up the river fully a mile. "D" Troop was at the upper end (west); "B" was rear guard that day and camped just west of the road, forming the left flank of the camp, the wagon train, except headquarters, company and officers' transportation, was well to the front (south), away from the river, and the horse strings immediately in rear, while headquarters, officers' families, etc., were strung along the bank of the river between the two troops. A bend in the river where "B" troop was, threw it north of the east and west line of the other camps. The ground occupied by the supply train, the horse strings and

"D" Troop was sandy and treacherous. Picket pins went down easily and were easily withdrawn. Our camp occupied



AH-KE-TAH-SHIN-GAH,
A Typical Indian Brave.

firmer ground, and with care we made our horses perfectly safe, knowing well the terrors of the stampede, taking in the treacherous nature of the ground occupied by all except us, and the fearful effects of hundreds of animals with lariats and flying picket pins sweeping over our camp. We hugged the bank of the river below the bend closely, occupying as little room with tents and the two company wagons as possible, and arranging horses so that a direct stampede east would pass them. In other words, a stampede would have to come around the bend to strike any part of our camp.

It was noticed by all of our troop that the 600 led horses were always badly picketed; that is, picket pins driven half way down and in many cases two or three lariats tied to one pin. A stampede had been feared by all of us. The man in charge of the horse strings was very ill most of

the time, and each man in charge of a string of horses seemed to have no conception of the crash that was sure to come sooner or later. "D" Troop did little better than the horse

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strings and "B" was spurred up by me and other noncommissioned officers to see that every picket pin was securely driven in the best ground. I have seen men stick their picket pins in an ant hill because it went down easily. Such a thing in our troop, or the fact that a horse got loose in any way, unless proven to be no fault of the rider, would insure his walking and carrying his arms the next day. Carelessness in picketing horses would not be condoned on this or any other trip that we ever made. A stampede was the terror of terrors on the plains, and this location was like camping on a volcano liable to erupt at any moment.

It was a perfectly bright, starlit night, and peace seemed to reign from end to end of the camp. Visiting was general among the officers, and a feeling of safety prevailed, now that we seemed to be clear of trouble with Indians. A little before nine o'clock the earth seemed to tremble as if in the violent throes of an earthquake. Like a whirlwind a stampede commenced with "D" Troop horses, rushing down through the extra or "led" horses and on through the mules, sweeping everything before it, barely missing officers and B Troop camp. On they went a little south of east down the river, in the mad rush trampling everything under foot, upsetting and breaking a dozen six-mule wagons by catching picket pins in the wheels as the moving mass rushed on; picket pins whizzing in the air struck an object and bounded forward like flying lances. To condense: "D" Troop lost two-thirds of their horses. All the string horses (600) and 600 mules, besides some private animals, were in the mad rush of destruction. One "B" Troop horse, an extra, succeeded in joining the gang. Realizing the full meaning of the terrible calamity, I ordered "boots and saddles," and when Lieutenant Hastings, who was visiting some officers arrived, the troop was ready to mount. The quartermaster sergeant was left in charge of the camp with a cook and bugler. Lieutenant Hastings rode over to headquarters and reported. Returning immediately, we mounted, and were off in the direction of the stampede. A few young officers en route to join their troop in New Mexico, and who were fortunate enough

to have their horses down near the river out of the line of the stampede, mounted and struck out.

The stampede was a mystery at headquarters, one opinion being that it was caused by Indians, another that wolves had frightened some horses and they had started all the others. There was more experience in "B" Troop than in the balance of the command, and the conclusion was that it would be no trouble to bring about a stampede from either cause. One Indian in a wolf skin might have done it, or one horse fright-



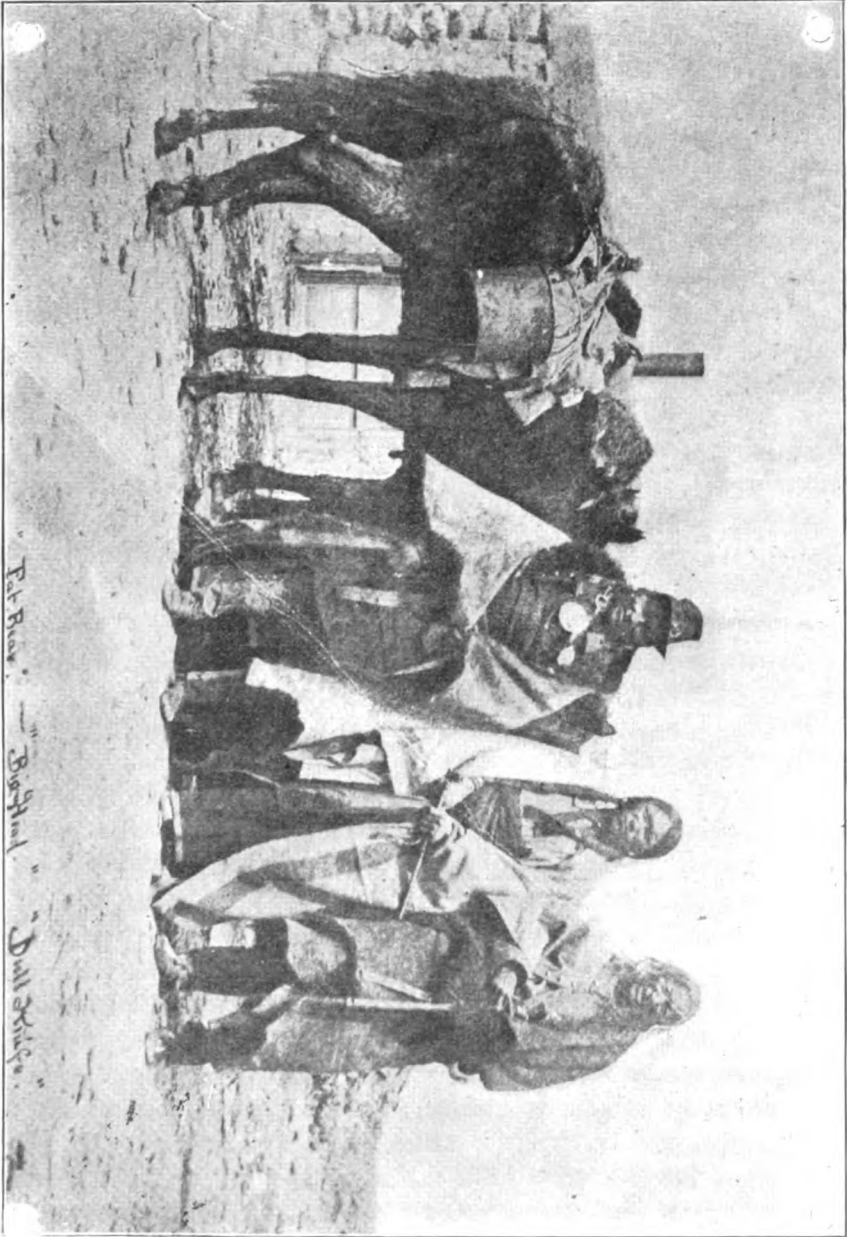
"PIONEER STORE" ON THE TRAIL.

ened at anything running the length of his lariat and scaring a few more might bring about the whole thing. We did not believe that any number of Indians were near us, or were making any hostile demonstrations. In short, the treacherous character of the ground made it unfit to picket a large number of horses and mules, and the stampede was almost a matter of course. We might have escaped such a calamity as inexperienced campaigners sometimes do, but the chances, considering the number of animals and want of care were against us.

It was nine o'clock when the troop started on the trail, feeling its way out through the wilderness of wrecked wagons, crippled and dead horses and mules and their lariats and

picket pins, met with in the first two miles, within which nearly a hundred horses and mules were found dead or injured by being pierced with flying picket pins or by being tangled in the ropes and dragged. We did not stop for any of these, but rode on to head off those animals that had escaped in a condition to travel. Within five miles of camp we headed off probably 200 mules. Most of them had broken their lariats and lost their picket pins by being trampled upon by other animals. We rounded them up and sent half a dozen men with them, following the river bank towards camp. Then we spread out and in a mile or two, rounded up another large band, nearly all mules, and sent another squad of men with them. It was my experience then, and always has been in a stampede, that mules tone down after a short run, whereas frightened horses never know when to stop, and run until exhausted. A herd of mules without horses to lead them in a stampede will hardly ever run more than two miles, circle around a little and then either stop to graze or strike a trail at a moderate gait. Within twelve or fifteen miles of camp we had turned back with different squads of men probably 400 mules and half as many horses; and now Lieutenant Hastings and three or four men started back with quite a band, mostly horses, leaving with me about twenty-five men. Following the same tactics and having driven in whatever we could find within a few miles, a small squad of men was started up the river towards camp. A couple of young officers, Lieutenants Lloyd Beall and — Craig, joined me with quite a band of horses about daylight.

At that time I was with a few men in the sand hills, probably a mile from the river. We swung around driving about sixty horses before us towards the river, and suddenly found ourselves close to an Indian camp, a little below it. There was no changing our course so as to avoid the village altogether without abandoning our captured animals. I put spurs to my horse to get between the horses and the Indian camp, followed closely by Hand and the two officers. The horses did not seem to notice the lodges until close on to them, and we rushed through the south edge of the village at a fast gallop. In the meantime the dogs set up a terrible



CHRYENNE CHIEFS.

barking, and as we looked back the whole camp seemed to be alive, as men, women and children hustled out of their lodges. Attracted by a large number of Indian horses, two of ours started to join them. Craig made a break to herd them off, and pistol in hand chased them through the Indian herd. Beall joined Craig and with the two horses joined my party in little more time than is necessary to tell it. And now the sun was coming up; we had ridden our horses at all sorts of gaits seven hours. In the band we were driving were several good ones. We rounded them up in a bend of the river and made a change and helped Beall and Craig to change. Knowing that the Indians would be soon scouring the country for horses, and with my small party of men I could accomplish nothing, I determined to scatter out 200 or 300 yards apart and drive all we could find to camp. I knew that the camp we had passed was composed of Kiowas and Comanches, about thirty miles below our camp. When about twenty-five miles below our camp, I saw horses on the opposite side of the river. They must be a part of ours that had crossed over; they were loose and grazing. Through my glass I could count about a dozen. Leaving the balance of the party to go on, driving everything they could before them, I took three men and crossed the river. Below the horses first seen there were no signs of any having passed down. We drove before us all that we saw and probably all on that side and arrived in camp near sunset with thirty-two. At retreat roll call every man of "B" Troop answered to his name. Among the big bands brought in by Lieutenant Hastings and others the dismounted portion of "D" Troop found mounts, and with citizen employees did good service in gathering in and caring for horses and mules.

To the fact that "B" Troop was able to mount promptly, and work systematically and vigorously, Colonel Fauntleroy owed his ability to move without abandoning many wagons, only a few that were badly wrecked. If pursuit had been delayed until morning the Indians would have had most of the horses. It did not take them long to scour the country and pick up what we left. They brought a good many to the camp for which the Colonel paid them.

Two days after the stampede we recrossed the river and found a fine safe camp on the north side.

Nearly all mules not killed or fatally crippled were saved, so that we were short only about fifty. About 150 horses were dead or desperately crippled, and many more not accounted for, probably found by Indians after we left; shortage, 200 or more.

Lieutenant Beall had been in arrest ever since we left Fort Leavenworth, and now he was released. He volunteered to go in pursuit of the stampeded stock, and on Craig's report he was restored to duty. This I understood at the time. Eight years later Captain Craig told me at Fort Union, where he was then quartermaster, that on the way to camp after I left to cross the river, Beall said: "Why the — didn't I think to lead off after those two horses? Here I am a first lieutenant and you just from the Academy; I am under a cloud and ought to have done something to recommend myself." "You did," said Craig, "you followed those horses through the Indian herd, pistol in hand (which was true, following the example of Craig), and I shall so report." And that report induced Colonel Fauntleroy to release Beall.

The history of these two men is interesting. Beall was a captain of artillery at the commencement of the Civil War, resigned and enlisted in the Confederate Army. Dr. M. S. Thomas resided in Leavenworth previous to the war, joined the Army of Northern Virginia as a surgeon, and after the battle following the capture of General Pope's headquarters, while riding over the battlefield near a Confederate battery he recognized a dog that used to belong to Beall at Fort Leavenworth. He knew that the dog was not far from his master, and proceeded to investigate. He soon found Sergeant Beall. A long conversation followed, in which Beall stated that many times he had been recommended for promotion, but on account of his reputation for drinking his endorsements were overruled before they reached the appointing power. I do not know his end. Colonel Craig married a wealthy lady in Ohio, resigned from the army at the close of the war, prosecuted a claim to a large Spanish

grant of land in southern Colorado, won it, and was independently rich, and died before he was fifty.

Colonel Fauntleroy sent for me and said some very nice things to me and of the troop, but there was no mention of the happenings in "orders." I take it for granted that Colonel Fauntleroy included the stampede in his report to the War Department, and that the quartermaster, Captain Mastin, reported the loss of public animals and other property, but no mention of it in newspapers, nor in "orders" anywhere. Men were supposed to do their duty without hope of special commendation. A troop that would do now what "B" did then would be commended by the colonel, by the department commander, by the division commander and by the general of the army in his annual report.

After recrossing the river I called on Major Chilton as soon as I could. I never saw him better pleased with the troop. "B Troop saved the command," said he. "Mr. Hastings tells me that you had 'boots and saddles' sounded and the troop ready to mount when he reached it after the stampede. I am glad you were so prompt and did not wait."

And now we moved off up the north side of the Arkansas by easy marches for several days, on up the river to Bent's Old Fort, and crossed; thence south to Timpas, Water Holes, Hole in the Rock, Hole in the Prairie, crossing Purgetwa—generally pronounced Picketware—below where Trinidad now is.

It was nearly 100 miles farther by this than by the Cimarron route to Santa Fe, hence it had been abandoned; had not been traveled since the Cimarron came into general use. Trees had fallen across the trail, mountain torrents had made great gulleys, and it took Lieutenant Craig's pioneer party—details from "B" and "D" Troops—several days to make the road passable. In the meantime our animals had the finest gramma grass I ever saw, and I never saw animals improve so much as ours did in so short a time.

One day while camped here Sergeant Peel went hunting; he was riding a mule, and when a mile or two from camp a thunder storm overtook him, and he sought shelter under a thick clump of pines. A flock of turkeys ran under a big,

low branched pine, not more than ten yards from him. The rain and hail came down in torrents while the wind blew a fearful gale. Peel had tied his gentle mule securely, and deliberately shot seventeen turkeys, every one in the head. They seemed to think the crack of his rifle a peal of thunder, and the fluttering of the dying turkeys did not frighten them. He finally wounded one and it flew away, the balance of the flock—half a dozen—following. Peel came into camp about dark with all that his mule could stagger under.



GROUP OF KAW INDIANS IN FULL DRESS.

Just before this storm I had marched my detail for guard to headquarters, and guard mounting was just over when the storm struck us. I put spurs to my horse and rode with all speed for camp. I had crossed a dry ravine going, and returning found a mountain torrent. I very imprudently dashed through it, looked back and saw a tree a foot through going down at railroad speed. A second later and I and my horse were hopelessly lost. As it was, nine horses out of ten would have failed, but my noble "Bruce," with courage that knew no faltering, having full confidence in his master, landed me safely and bounded away as if there was nothing the

matter. This horse was my special pet; every soldier's horse ought to be. It may be a little hard for a good soldier of fine feelings to pet a miserable plug, and on the other hand, it may be a little hard for a good horse to think much of his plug master—both combinations that ought not to exist. Good men and horses having faith in each other will follow the right kind of leader to victory or annihilation without a murmur. The horse need not be of any particular strain of blood so that he is of a saddle horse breed, made to gladden the heart of the proud man who rides him; not a thick shouldered, fat headed, short stepping thing, only fit for a huckster, but a horse with flat, muscular legs, short back, well quartered, well cupped sound hoofs, high crest, lean head, bright eyes and brainy. With this latter combination, he may be Spanish broncho, Arabian, Kentucky thoroughbred, or mixed—never ask a man to ride a plug off the farm where he is used to plow. One of the greatest mistakes this government is making is in not using a part of the Fort Leavenworth and Fort Riley military reservations to breed a sample of saddle horse, if for no other reason than to show the farmers of the surrounding country the kind of horse the government requires for cavalry and artillery.

Having gotten the road open and the animals well rested, we moved over the Ratton Pass and camped at a pond at the foot of the mountains. We were rear guard this day and had a tedious time; some wagons wrecked, and we came into camp late. The next morning we were in advance at sunrise. Approaching Red River, a big flock of turkeys were plainly to be seen on the trees; they had never been frightened and knew no fear. I asked permission of Lieutenant Hastings to ride ahead and kill one of them, which I did, shooting a big fellow from the tree with my pistol.

The first settlement that we struck in New Mexico was Maxwell's Ranch, on the Cimarron; the next was Riado, where I Troop was stationed. We here heard the first account of the battle fought six weeks before between I Troop and the Apaches, heretofore referred to. I met my old friend Byrnes, whom I had not seen since we parted at Fort Leavenworth the 1st of April, 1850. Now he was first sergeant

as heretofore related. Headquarters, band and "D" Troop stopped here, while "B" went on.

Arrived at Fort Union, we went into camp by ourselves about two miles from the post. And now the troop was under orders to proceed to Fort Stanton in a few weeks. Major Chilton found his commission as major and paymaster, was ordered to report at Washington, and was released from arrest. As my time would be out in less than two



"COUNCIL OAK."

Under this Oak at Council Grove, treaty was made with the Great and Little Osages for right of way of Santa Fe Trail, Aug. 10, 1825. Estimated age of tree, 250 years.

months I was promised a furlough before the troop would go. Colonel Cook would leave Fort Union for Fort Leavenworth in two weeks with a miscellaneous command, and this was my opportunity to go to the "States."

Pitching two wall tents facing each other and stretching a fly to cover the space between, I had a good orderly room and office, and with Corporal Ferguson for a clerk, assisted by Lieutenant Hastings, we proceeded to straighten up all company accounts, and bring everything up to date before my departure. Nothing in the way of clerical work was left

undone on Major Chilton's account as well as Hastings'. I had never had a company clerk and no assistance except what Lieutenant Hastings was always glad to render, and assistance from Ferguson or some other in comparing muster rolls. The records will show that when I left the clerical work was complete and there would be no unsettled matters between the troop commander and any of the departments, and there would be no dispute or confusion about any man's account.

I bought a mule, and Hastings gave me a saddle, bridle and blanket. I got permission to put my provisions, blankets, clothing, etc., into a government wagon in which I might sleep at night. Transportation was scarce and teams heavily loaded. A man on furlough had no status and no rights. The wagonmaster, Mr. Rice, very kindly invited me to mess with him, which I was very glad to do. The day of my departure came, my last roll call was made at reveille, and I passed from right to left of the troop and shook hands with every man. I was obliged to nerve myself to the utmost to meet this trial, one of the greatest of my life. My work was done, I had turned my back upon my best friends. I would never make better. I never saw any one else similarly affected. I had met and stood as severe shocks as any man of my age that I had ever known, and inwardly prided myself upon being equal to any emergency, but now I seemed bewildered. I went to my tent and pretty soon Hastings came in and said: "'Tis not too late to reënlist; perhaps you had best reconsider your determination to leave the troop." This seemed to bring me to my senses. I straightened up and replied: "Lieutenant Hastings, I appreciate all you say and all of the good will that you have ever shown for me, but I have matured my plans for the future. I am tearing myself away from the best friends I ever had and am doing it as a matter of duty to myself. There is nothing in the army for me from my standpoint. I am nearly twenty-six years old, and in another five years I would be thirty-one. I have learned all that I can hope to learn in the army that would assist me in civil life. Surely my services will be worth more out of the army than in it. At any rate I have

nerved myself for the trial, the bridges are burned, and there is no retreat." There was one man, Sergeant Worrel, in the hospital. Hastings mentioned the fact thinking I might have overlooked him. I said that I did not have to say "good bye" to him. I had no use for him; he was a thief, and would be guilty of any crime he dared commit, and I gave the Lieutenant satisfactory evidence that what I said was true, and told him that sooner or later he would find that I was right. I have heretofore stated the end of this foul murderer, and will now drop him.

There were two married men in the troop, Sergeants Peel and Espy. Mrs. Peel and Mrs. Espy gave me a farewell dinner, learning which Mrs. Hastings sent them some delicacies not to be had otherwise. Peel's only son, Percival Lowe Peel, was two years old. Having said "good bye" to Lieutenant and Mrs. Hastings and their lovely children, and to Mrs. Peel and Mrs. Espy and their boys, I started out for the first camp, ten miles. When half way I saw Colonel Fauntleroy, staff, band and "D" Troop en route from Riado to Union. The short cut that I was on and the road that they were traveling were a mile apart. I wanted to see Bryden, now of the band; in fact I would have been glad to salute the Colonel for the last time, and the adjutant, Lieutenant Magruder, and to say "good bye" to genial old Bandmaster Hooper, who had been my dancing master several winters. I got under a clump of pinyons, sat on the ground and saw them pass. To go down and shake Bryden's hand would never do; it would be a severe trial to say "good bye" to him, and I did not want to trust myself. And so I watched the column, the dear old fellow near the front, his trumpet over his shoulder, the cheering notes of which I would never hear again. It was my last look at all of them except Sergeant Candy of "D" Troop, now Colonel Candy of the Hampton Soldiers' Home.

Arrived in camp Major Chilton's servant came to say that the Major wanted to see me. When I reported he wanted to know how I was fixed for the trip. I told him I would be all right.

We came in the Cimarron route, leaving the old trail near

Diamond Springs, turned north to Fort Riley and thence to Fort Leavenworth. At Riley I left the command, and arrived at Fort Leavenworth two days later, and by invitation of Levi Wilson, who was general superintendent of teams, etc., I took my meals at his house, a room having been furnished me elsewhere.

Major Ogden told Mr. Wilson to employ me, and I was put in charge of a small train, five six mule teams for Fort Riley and met Colonel Cook's command ten miles out. I was warmly congratulated on being so well employed.

This was the beginning of five years' continuous service in the Quartermaster's Department, the most interesting part of which I will sketch hereafter. I have told the story of Fort Riley in the October number, 1902, and in my next will give my experiences in the ("so-called") "Kansas War" of 1856.

NOTE.—The plates for this paper were kindly loaned us by Mr. Geo. P. Morehouse, of Council Grove, Kansas.

[*To be Continued.*]



THE SQUAD SYSTEM.

BY CAPTAIN WILLIAM T. LITTEBRANT, TWELFTH U. S. CAVALRY.

A TROOP'S discipline and instruction, therefore its efficiency, which is our aim, are promoted by the subdivision of the troop into squads, which thereby become important units under noncommissioned officers upon whom a constantly increasing reliance should be placed until the attainment of the ideal. This confidence in the noncommissioned officers and the requirement that they perform certain well defined functions, different from and in government of their fellows, the importance that they attain in the eyes of the privates, who recognize them as the medium governing the performance of so many of their duties, gradually inspire them with an increasing respect for their own position and a higher regard for their obligations. In a new organization this sentiment is more easily instilled into the minds of the recruits than it is into that of the old soldier. Some of those selected as noncommissioned officers will not stand the test and must be disposed of. In this new office they are entitled to instruction and encouragement under which many will develop surprisingly. Those who do not must revert to the grade of private. However, in a new troop where the noncommissioned officers are selected at little better than random, there is much material to draw from, and yet, for a troop commander deeply concerned with the welfare of his troop, this is a work of much labor, a trial of patience and a vexation that would willingly be avoided.

The regulations sanctioning this admirable system have not been thoroughly appreciated, and I have never seen the system properly applied. Some years ago, while at Fort Apache on a practice march, I observed the application of

the system in one of its details at stables by an officer stationed there, who informed me that in that respect it worked admirably. At other places I have observed its application in other respects, but never anywhere in its entirety.

Since coming to this post and with a new troop, I have found it the only way to accomplish any results at all, and the whole beautiful scheme has worked itself out, so that now noncommissioned officers in the troop never question their responsibility.

In the application of this scheme it frequently happened that the new noncommissioned officers did not properly respond. This was remedied at first by admonitions, while subsequent repetitions of the neglect or manifestations of indifference were followed by courts martial, which usually rectified the matter. In my troop, with two exceptions, the noncommissioned officers were recruits with the balance of the troop. I had to encourage and instruct them in the business of obeying and commanding, and repeat, and keep on repeating. This done, the subsequent administration and instruction of the troop have been vastly facilitated by the squad system.

THE SYSTEM.

To arrange the troop into squads: The members of the troop, except the noncommissioned officers, having fallen in line, they are arranged according to size, the tallest men in the center and the smallest on the flanks. The troop is then divided into four squads, numbered one, two, three and four, and noncommissioned officers assigned to squads in accordance with their size. Now these men always fall in in exactly the same place for all formations, such as reveille, roll call, stables, drills, mounted or dismounted, etc. Each noncommissioned officer knows all of the men of his squad, and can at any moment call his roll and account for the men of his squad. For mounted drills, the men having marched to the stables and saddled, fall in in squads, each squad (man, horse and equipment) being inspected by the squad chief in a squad formation before leading out to fall in at the command of the first sergeant; so do the men fall out of the

squad formation and fall in in troop formation in exactly the same arrangement in which they are in squads and in line dismounted. The advantages of this so far as the men are concerned are obvious—an advantage in battle heralded from the time of Cæsar.

THE BARRACKS.

In the barracks the men are squadded under their non-commissioned officers, the squads being likewise arranged in sequence, and the noncommissioned officers are held responsible for the cleanliness and order and instruction of the men. I found great difficulty in securing the first two qualifications, but now the squads are required to be marched by the squad chief into the barrack rooms immediately after the reveille drill, where each man is required to sweep beneath his bunk, make his bed, arrange his clothing and shoes, and then to be inspected by the squad chief before the squad is dismissed. Where any exceptions are taken to the condition of the man's effects at the daily inspection, the noncommissioned officer is first heard on the subject and then the man. With the former nothing more than admonitions have thus far been necessary. The noncommissioned officer sees that each man uses sheets and pillow cases as prescribed; that is, two sheets and one pillow case. The top sheet one week is used as the bottom sheet the succeeding week. The men are required to place one sheet and one pillow case in the wash weekly. These changes of linen are made so as to be clean for the Saturday inspection. In case of men failing to take the prescribed baths, as recorded in the bath book in the hands of the noncommissioned officer in charge of quarters, the squad chief is required to march them to the bath house for the necessary ablutions. When any man shows himself after ample instruction, ignorant of duty, his squad chief is required to have him instructed, either by instructing him himself or detailing some other noncommissioned officer in the squad to do so. In case of disorder or neglect, not only the squad chief but other noncommissioned officers in the squad are held responsible and given their share of reproof.

THE MESS HALL.

In the mess hall each squad sits at its own tables, under the observation of its own non commissioned officers, the ranking noncommissioned officers at the ends of the tables and each man in his assigned place, which he at all times occupies. Noncommissioned officers are held responsible for any disorders occurring there, and are required to explain their own and others' conduct in the premises. In view of the fact that soldiers, especially half-starved recruits, are voracious, the mess hall has been my special concern. The mess is in charge of a sergeant, who daily makes out a bill of fare and posting same in the kitchen, gives orders to the cooks and measures out the supply. This sergeant, except when on guard, is always on duty at meals, watching the men, their behavior and the service at meals. This is necessary since other noncommissioned officers frequently, intent on eating, fail to note infractions of the rules. The frequent reports of the mess sergeant have gradually resulted in an improved mess morale.

In view of the fact that men of limited intelligence do not hear but absorb orders and customs, rarely are verbal orders given concerning troop matters, but all are made of record. These orders are pasted together in convenient form and with the Articles of War are read at each meal by the noncommissioned officer in charge of quarters, or some one duly detailed, who obtains his meals before the troop eats. While orders are being read men are forbidden to engage in conversation except that necessary to obtain a supply of food. While of course this requirement is frequently violated, I presume some things are accomplished, viz: better deportment and the infrequent indulgence in boisterous or profane language, horse play, throwing articles of food, etc. Noticeable forbidden acts are reported to me and admonition or other punishment invariably follows. While I hold non-commissioned officers responsible for their squads, no non-commissioned officer present is relieved from responsibility for forbidden acts committed in his presence.

THE MARCH.

On the march by troop, the arrangement by squads is very much superior to any that I have yet seen, and the results accomplished are better. Immediately upon leaving post or camp, the march is by squads, by twos (over trails by trooper) under the squad noncommissioned officers. In case the country is dusty, the columns straddle the road and take such distance from those that precede as to prevent the squads in rear of the first always traveling in a cloud of dust. Any one who has ever ridden in the rear of a troop of cavalry can understand the advantage of this. This distance between squads varies from, say twenty yards to one hundred or one hundred fifty yards, and within general instructions this is left to the squad chief. To fully understand what is accomplished by this method of conducting a march it will be necessary to explain it a little in detail. For three-quarters of an hour after starting in the morning the troop travels at a walk; then follows a halt of fifteen minutes, during which time the men are authorized to fall out and attend to nature's calls. All of the men thoroughly understand this and count upon it. Likewise, here many horses urinate. Then after resuming the march, I proceed at the rate of fifteen minutes' walk and fifteen minutes' trot, and repeat for two hours and fifteen minutes, so as to bring the last pace before halting, at a walk. Then a halt of ten minutes, then a resumption and repetition of the previous two hours and fifteen minutes. Ordinarily during the first period of three-quarters of an hour, two and a half miles will be traversed. After that the regular gaits are pursued. This will then at the end of six hours land you at twenty-eight and one-half miles from the starting point. If the march be thirty-eight or forty miles, it is advisable to halt here for three-quarters of an hour or more. If only thirty-three or thirty-four miles, it is well to halt only fifteen or twenty minutes and resume. This method of conducting a march, both as to the rates of travel and periods between halts is so influenced by temperature, character of the road and water, that it is never lived up to, and no two marches

are conducted the same, but, by conforming to the general idea, the best results are, I believe, accomplished; camp will be reached sooner than otherwise and stock grazed, which both nourishes and rests. If the weather be hot and the roads be bad, hilly, rocky, or sandy, less trot will be indulged in and consequently less distance covered in a given time. In conducting the march thus in level country, all squads take the walk and trot at identically the same time and throughout the column, the last at the same time as the first trooper.

In halting, however, each squad closes up on the preceding squad and dismounts at the squad chief's command. This, thus and then, enables the troop commander to examine the horses. In resuming the march, the leading squad mounts and leads out, the next then when it has its distance and so on, each by command of his squad chief. If the country be irregular, short spaces alone admitting of the trot, the squads do not trot simultaneously, but when they arrive at the point where the trot was taken up by the preceding squad; so likewise when dismounting and walking are concerned. Thus, it is observed that everything is according to the circumstances of the case. In view of the fact, too, that in hot countries, horses' backs are often made sore by repeated and prolonged pressure on the near stirrup due to the commands, "Prepare to mount and dismount," I always omit them, and frequently require men on alternate days to mount and dismount on different sides of the horse.

On the march the squad chiefs are required to frequently ride in rear of their squads, and in case there are two noncommissioned officers with the squad, one must always be in rear, this to observe and prevent men slouching in the saddle. Formerly, I made my walking and trotting periods longer, but I observed that in say one-half hour men at a walk will become loggy and dull and have a tendency to slouch in the saddle. This evil is corrected by the shorter periods, the frequent trots causing the blood to flow through the veins more lively, bringing the flush to the cheek and making everyone feel better. One of my rules is never to

allow a man to change his seat after he once gets into the saddle. To be sure, I cannot prevent some men from at times causing sore backs, which may be due to a thousand causes, but one fertile source of them is removed.

Men very soon learn that if they are caught slouching they must walk, and few relish a ten, fifteen or twenty mile walk. This punishment by walking, by the way, is a most efficacious one and effectually reaches all offenses committed either on the road or in camp. This system thus places each squad (men and horses) immediately under the squad chief, increases his responsibility and importance, and causes the men to look directly to the squad chief as the medium through whom all things are accomplished.

THE CAMP.

While in the field the duties of the squad are plain. Thus upon arrival in camp the first squad takes charge of the officers' tentage, and likewise the following morning it strikes the tentage and binds same for packs or wagons. The second squad hunts wood and likewise cut the wood for the kitchen; the third hunts water and keeps the kitchen supplied with water; the fourth constitutes the guard, taking the led horses. These duties change daily upon pulling out of camp by rotation. The first succeeding to the duties performed by the fourth, the second to those of the first, the third to those of the second and the fourth to those of the third. Likewise do they change their position in the column of march, the guard and the led horses always marching in rear. The squad is thus always kept intact and always under its own noncommissioned officers. In case of great scarcity of wood and water, all squads except the guard seek same upon the completion of their special duties. The guard of course perform herd guard and with the aid of the force ordinarily at the stables, lay the picket rope. In the morning before the horses are taken from the picket line, the noncommissioned officer succeeding to the guard accompanied by the noncommissioned officer of the old guard verifies the horses, and reports, accompanied by him, to the

troop commander for orders. He then has his squad take charge of the led horses. The extra nose bags are turned in to the quartermaster sergeant by the noncommissioned officer of the old guard. The led horses are fed by the guard squad.

Where the camp ground is not well adapted for a properly laid out camp and everything is secure, squad chiefs may be directed to select some convenient location and pitch their squad camps. This is a good innovation, as it promotes a squad esprit.

SECURITY ON THE MARCH.

The method of conducting a march by squads has its advantages for a country such as the Philippines are said to be, where the density of the vegetation prevents the employment of flank guards. Thus, in case of a frontal attack on the leading squad, the second or third squads in column taking advantage of their distance from the front, will be guided accordingly, both or one endeavoring if possible to make a detour to one or both flanks to attack the foe in flank, or one joining the leading squad to aid and support it while the other makes the detour, the guard performing its natural duty in rear, sending such men as it can spare to the front. Noncommissioned officers are instructed that ordinarily the employment of only one flanking detachment is the safest procedure. In case the enemy permits the leading squad to pass and attack an interior squad on the flank, the position of the leading and rear squads, should the country be penetrable, enables them to approach and take the foe in flank, and noncommissioned officers properly instructed will always have in mind such contingencies. In case the country is wooded, but sufficiently open to permit its easy penetration, I believe the employment of skirmishers with forty, fifty or seventy-five yards intervals much superior to the ordinary method laid down for the performance of advance guard duty, because in such a country where it is impossible for the detached parties to see over the tops of the vegetation, noncommissioned officers in charge of them cannot keep in touch with the advance guard or main body. I

have taken my troop into the mesquite south of the post and lost one or two detachments every day for a week. This, notwithstanding their being allowed the greatest latitude in their movements, and this upon ground with which every man is familiar. One noncommissioned officer, a fine horseman and experienced soldier, was lost on identically the same ground on two successive days; hence, I now deploy the leading squad to the right of the road with above stated intervals. Each man to the right and rear (from ten to fifteen yards in rear) of the man with whom he must keep touch, by voice, sight or sound. The base: I make a corporal and place one man ahead of him on the road about fifty yards. The men are numbered to the right and left of him, two, three, four, etc.; the corporal himself is numbered one. Frequently the corporal calls "Number One," and then each man to the right, in succession, calls his own number in a moderate tone, so that his neighbor may hear and keep in touch with him. The second squad is deployed similarly to the left, the men calling off as described for the right flankers and at the same time. Thus a squad of eight men will cover a stretch of country varying from 300 to 500 yards which is ample for a troop in such a country.

In case there are more than eight men in a squad, the squad chief should keep the balance with himself deployed in rear of the center of the squad, or else in column on the road about three hundred or four hundred yards in rear of deployed skirmishers in advance; however, the sergeant or other noncommissioned officer in command of the extended line must frequently ride the line to see that touch has not been lost. In case of attack in front or in front of one flank of skirmish line or to one flank of skirmish line, the same principles obtain as in preceding cases, each squad chief being instructed to assemble his men on the skirmishers most convenient to the point of attack, and then conducts them to the best possible advantage. Of course, circumstances alter cases, and officers are expected to always be on the ground to properly guide the attack, but the principles are as above stated. In case of an attack in rear, the led horses are speedily conducted to the front and the other squads guided

as before, the squad chiefs being instructed to always conduct their men towards the fire, bearing in mind the advantages of an attack on the flank.

While the arrangement of squads is designed solely for a single troop on the road, it might, in exceptional circumstances, be used with variations by a cavalry command advancing across country where the obstacles were of no moment and the footing firm; thus, have the squads march abreast of each other in column of twos, with suitable intervals, guard squad in the center, one lieutenant to follow the troop, the guidon upon which the troop should regulate to accompany the captain in advance.

STABLES.

The horses are squadded and belong to the same squads as their riders. They are so arranged in stalls and are always so tied on the picket line. This acquaints each horse with his neighbor, and noticeably reduces the tendency that horses have to kick and bite strangers. The horses are groomed by squads, and although the whole troop is marched to the stables by the first sergeant, each squad grooms under the immediate supervision of its squad chief, and no man changes horses until the squad chief has inspected and passed upon his work. Since the scheme has been inaugurated I have not observed a single man fail to hustle. It is like task work, which anyone who has worked bodies of men knows accomplishes more and better work than any other system. When the horses of the squad are groomed to the satisfaction of the squad chief, he reports it to the first sergeant, who reports it to the officer present, and if the inspection justifies it the horses are led in. This done, the squad chief marches the squad to the saddle room (where likewise all of the saddles are arranged in squads, and for the arrangement and condition of which the squad chief is responsible) and if the saddles and equipments are not properly adjusted or are dirty, he requires the men to adjust and dust them off. This done, he marches his squad to the barracks and dismisses it. Likewise after all drills, each man is required to dust off and

arrange his equipments, and this under the supervision of the squad chief, who may be summoned at any time of the day and have his attention invited to neglects of his men. However, I have rarely had occasion to take such steps in the matter, since the order requiring the equipments to be adjusted, etc., after stables has impressed upon the men the fact that there is but one way for equipments to be kept. In saddle rooms of the class such as we have here, some things cannot be kept as perfect as other and better conditions would admit of. Each squad is required to keep the earthen floors of their own stalls in good condition, and keep the woodwork lime-washed. In assigning horses originally, the large horses were placed in the center squads and the small horses in the flank squads, so that each man would have a horse according to his stature, and this arrangement has, notwithstanding the vicissitudes of the service, been maintained.

In conclusion, I might say that the addition of recruits does not cause any derangement of the system, his size determining his squad. In case the squads thereby become unequal, the largest men of the small squads are transferred to the large squads, or the smallest men of the large squads to the small ones.

Thus it is seen that there are very few matters arising in troop administration that are not facilitated by the squad system, not the least merit of which is the relief afforded the first sergeant and the troop quartermaster sergeant.

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HISTORY OF THE FIFTH CAVALRY IN THE
SPANISH-AMERICAN AND PHILIPPINE WARS,
MAY 1, 1898, TO OCTOBER 10, 1903.

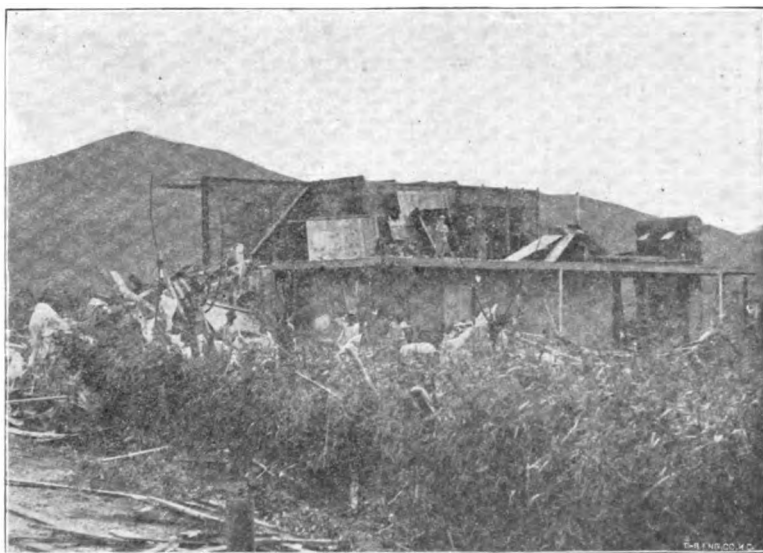
BY CAPTAIN N. F. McCLURE, FIFTH CAVALRY.

THE story of the Fifth Cavalry in the Spanish-American War and in the Philippine disturbances, though not filled with dashing charges and hair-breadth escapes, is still one worth recording. The regiment was ever ready for the front, and it was not the fault of the rank and file, but their misfortune, that they played a part of no more importance in these events.

When war with Spain was declared, the Fifth Cavalry was stationed at various post in Texas. About May 15th it was concentrated, except Troops D and F, at New Orleans. On May 25th the regiment moved by water to Mobile, where the two absent troops joined it, and all these changed stations on June 5th to Tampa. It was supposed at this time that the stay there would be but a few days at most, and a camp was selected convenient to the railroad and without special regard to sanitary conditions. This camp was moved about July 20th to what was supposed to be a better site, and this being flooded by August 5th, necessitated a second change to Tampa Heights. But the seeds of typhoid fever had already been sown, and that awful epidemic now began, which resulted in the record of the Fifth Cavalry for sickness being one of the worst of any regiment, regular or volunteer, in the service.

Several times during this period there were orders to board transports for Cuba or Porto Rico, but, for one reason or another, nothing came of this, except that Troop A, through the individual efforts of its commander, Captain A. C. Macomb, managed to secure passage on the same transport with a light battery, and sailed for Porto Rico July 25th.

After some delay off Fajardo, the troop with its horses landed about August 5th at Ponce, and was attached at once to the left column of the Porto Rican expedition. It behaved with great gallantry in this movement, and was especially conspicuous for good work in the affairs of Hormigueros and Rio Prieto near Mayaguez. But the protocol of August 13th soon cut short its career, and its services from that time until the arrival of the rest of the regiment were confined to preserving law and order and guarding the interests of sugar planters in the vicinity of Tas Marias and Tares.



OFFICERS' QUARTERS DESTROYED BY THE HURRICANE OF AUGUST, 1890,
AT HUMACAO, P. R.

The headquarters and the remaining eleven troops left Tampa August 15th, and went into camp at Huntsville August 18th.

Many cases of typhoid contracted in Tampa developed here, and the wisdom of the change was not at first apparent. But the bracing breezes of the uplands eventually did their work, and by November 1st seventy-five or eighty per cent. of the rank and file were in good physical shape.

On November 4th, headquarters and Troops B, D, E, G, K and L started for Savannah and embarked there November 9th, arriving at Ponce, P. R., on the 14th inst. These troops were scattered over the central and western parts of the island, headquarters, band and one troop locating at Mayaguez.

Troops C, F, H, I and M remained in camp at Huntsville, where the suffering from the inclement weather was considerable, until January 21, 1899, and then took train for Savannah, sailing from that port February 1st for Porto Rico. They disembarked at San Juan February 6th to 10th, and took station as follows: "C" at Hunacao; "F" at Bayamon; "H" at Arecibo; "I" at Ponce and "M" at Cayey.

From the time of leaving Huntsville, November 4th, until the following October, Colonel C. C. Carr commanded the regiment. Colonel W. A. Rafferty then joined at Mayaguez and held the command till his death September 13, 1902.

Troops A, B, C, and D sailed for the United States from San Juan, March 24, 1900, landed at Newport News, Virginia, and reached Jefferson Barracks April 2d.

The third squadron, Troops I, K, L and M, with the band and headquarters, sailed from San Juan, August 7, 1900, landed at New York and took station at Fort Myer, Virginia.

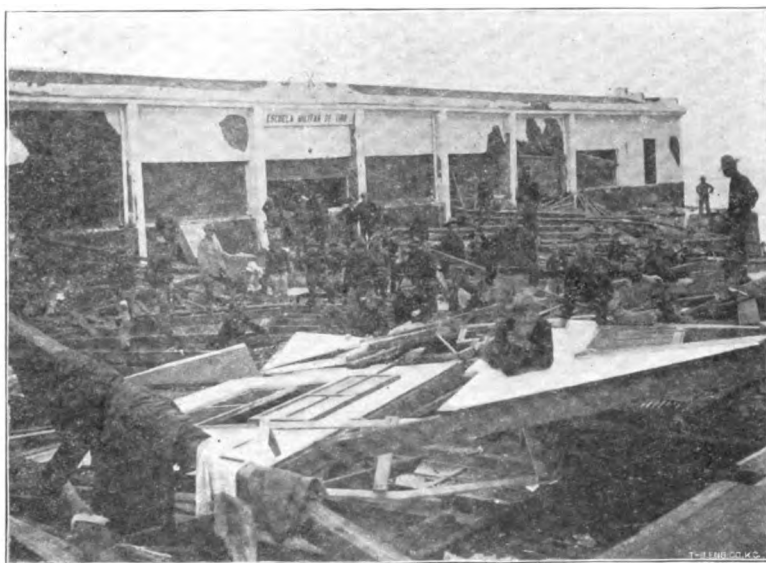
The second squadron, Troops "E," "F," "G" and "H" left San Juan December 15, 1900. Troops "E" and "G" took station at Fort Ethan Allen and Troops "F" and "H" at Jefferson Barracks, Missouri.

REMARKS ON THE SERVICE IN PORTO RICO.

The service of the Fifth Cavalry in Porto Rico was trying, though not specially hazardous. It was well performed. The changes from martial law to military government and from the latter to civil government brought with them much hard work for officers and men. Troops were generally divided up into small detachments, relieving want and destitution, guarding haciendas, patrolling, holding elections, building roads, etc. The rights of the people were upheld and respected universally, and there are few in-

stances recorded of lawlessness or disorder among the men of the regiment.

When the terrible hurricane of August 8, 1899, swept the island it left devastation in its track. From San Juan to Fajaidas on the northeast coast the storm was less severe, but in the other portions of the island the foliage was whipped from the trees and many of them uprooted; the cocoanut groves were more than half destroyed; the fruit disappeared; and the towns were leveled to the ground. An unprecedented deluge of rain accompanied the storm and flooded the



BARRACKS OF A TROOP FIFTH CAVALRY DESTROYED BY HURRICANE OF AUGUST 8, 1899, SAN JUAN, PORTO RICO.

lowlands. Two thousand six hundred people lost their lives, of whom five hundred were drowned in Ponce and five hundred in Arecibo.

The sickness and starvation following in the wake of the storm was little less severe than the hurricane itself. Several men in the Fifth Cavalry also perished. Two of these were at Humacao, one being drowned and the other being crushed in the ruins of the large brick barracks which blew down. In many cases the men lost all their clothing and personal effects, for which they were never reimbursed.

To meet the want and destitution caused by the storm, the issue of rations from the surplus in the Subsistence Depot at San Juan was begun, and this was followed by great quantities of food-stuffs, clothing and medicine donated and sent by the people of the United States. To distribute these, the troops of the Fifth Cavalry and a part of the Eleventh Infantry were divided into small detachments and scattered through the devastated towns. Then began months of hard work getting these supplies to the people. Transportation was limited, the rough weather often rendered it difficult to get stores landed along the seacoast, while the rushing waters of the storm had so completely destroyed the roads in many localities that it was well nigh impossible to get supplies to the interior. In many cases it was necessary to use pack horses and pack mules.

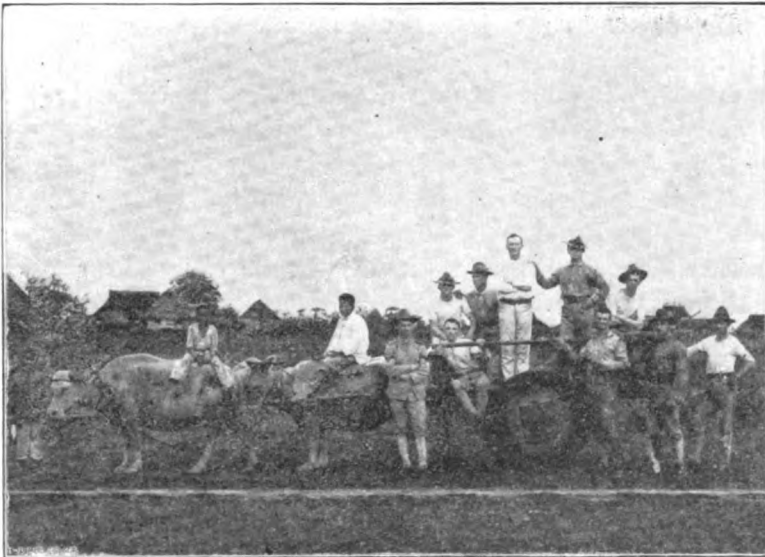
Officers and men worked hard and carried relief to many a disheartened and discouraged community. Captain H. W. Wheeler and Captain H. S. Bishop, Fifth Cavalry, were particularly active in this work. The former often accompanied his pack teams over miserable mountain trails to interior towns and hamlets. In some districts the relief was kept up for many months, and I do not hesitate to say that the government, by its prompt action in sending supplies, and the troops by their faithfulness in distributing them, saved thousands of lives. It was long before the fair island was itself again.

The average stay of the troops of the regiment in the United States after the return from Porto Rico was one year, though some troops remained less than that and some longer. On March 18, 1901, headquarters, band and Troops A, B, C, D, I, K, Z, and M sailed for the Philippine Islands, arriving in Manila April 17th. Headquarters, band and the third squadron were stationed in Rizal Province, while the first squadron went to Guagua and Angeles.

On July 1, 1902, Troops E, F, G and H sailed for the Philippines, arriving in Manila July 29th. Two troops took station at Pasay Barracks, one at Angeles and one at San Isidro.

The following is a brief epitome of the service in the

Philippine Islands: Headquarters and band at El Depinto, San Felipe, Neri and Camp Stotsenburg. Troop A at Angeles and Camp Stotsenburg; Troops B and D at San Fernando and Camp Stotsenburg. Troop C at Tarlac for three months and then at Bayamburg, Province of Pangasinan, when in October, 1901, three typhoons were experienced, the last of which destroyed the stables at Bayamburg and nearly all the buildings of the detachment in Bantista, thus entailing much suffering and loss of property. In June, 1902, Troop C went to San Isidro, where it remained



NATIVE TRANSPORTATION AT ANGELES, P. I.

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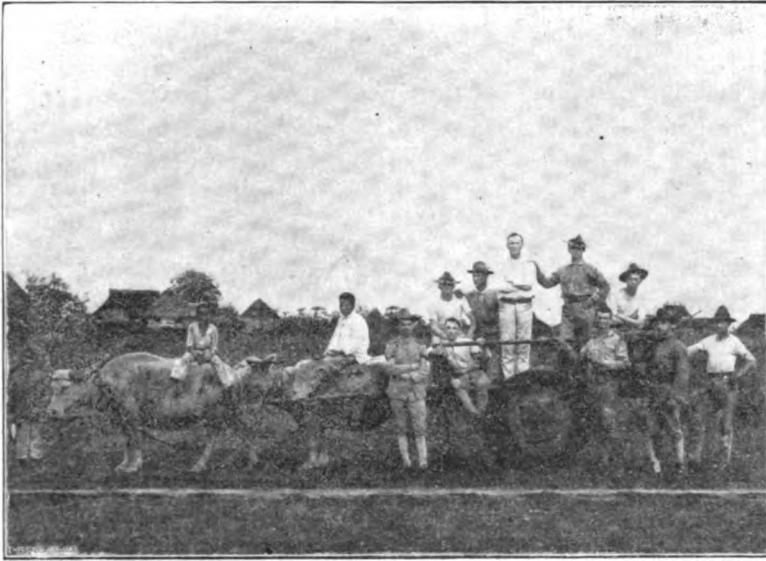
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of assisting in the guarding of the Manila water supply. Troop K was first at Pasig, but in November, 1902, it moved to Camp Stotsenburg and was the first garrison at that point.

Troop L was at San Felipe Neri but moved to Camp Stotsenburg in December, 1902. Troop M spent its entire service in the lonely post of Tanay, amid ladrones and insurgents. The troop was often called out to chase these enemies of the government, or by its presence to overcome them.

The important work of guarding the Manila water supply deserves more than a passing mention. The Fifth Cavalry was engaged in this for some eighteen months, Troops G, H, I, K and L participating. During that time they were materially assisted for five months by a battalion of the Twenty-eighth Infantry and later for about the same period by a battalion of the Second Infantry,

When the Asiatic cholera first appeared in Manila, March 21, 1902, Colonel Rafferty, Fifth Cavalry, at once realized how important it was to prevent the water supply of the city from becoming infected. He was placed in command of all troops in the Mariguina Valley, with full power to take such steps as he found necessary. He first made a careful inspection of the basin of the water supply and this developed the fact that more troops would be needed. He applied for them and about April 25th a battalion of the Twenty-eighth Infantry arrived. A rigid river guard and quarantine service was at once instituted. So effective has this been that, at this time, two years after it was first established, the water supply of Manila has never been infected by cholera germs. When we consider the filthy habits of the people, the dense population of the Valley and the extremely small rainfall of the seasons of 1902 and 1903, this result speaks volumes for the efficiency and devotion to duty of the troops engaged in this work.

After Colonel Rafferty's death, on September 13, 1902, from injuries received in a fall on the 6th of the same month, the command of the troops in the Valley devolved upon Lieutenant Colonel C. A. P. Hatfield, Fifth Cavalry.

He also took command of the regiment at the same time and held it until his promotion May 1, 1903.

In February and March, 1902, and again in May and June, 1902, Troops I, K, L and M were engaged in some very arduous service in pursuit of insurrectos or ladrones in Rizal Province. Many stirring incidents occurred too numerous to record here, but one deserves more than a passing mention.

On Decoration Day, May 30, 1902, seven enlisted men of Troop M, Fifth Cavalry, left Tanay for the purpose of going to Binangonan to decorate the grave of a comrade who had died there of cholera a short time previous. On the way they met a large band of insurrectos and five soldiers were captured, the other two escaping. One of these escaping, soon reached Tanay and gave the alarm. The troops from Tanay, Pasig and San Mateo at once took the field and for three weeks scoured the country trying to catch the miscreants. On June 3d the corpses of the five soldiers were found, badly mutilated, and taken to Tanay for burial. A number of the assassins were afterwards captured, and one got as much as three years in Bilibid. It being time of peace, they had to be tried by civil courts. No wonder the natives often regarded us as being "easy."

About January 1, 1903, half the regiment was concentrated at Camp Stotsenburg, and began the labor of building that post, Colonel Hatfield in command. The long months of hard work brought on much sickness, and for a while the surgeons attributed this to the site and tried to have the place abandoned. But common sense eventually triumphed, and the finest site in the Philippine Islands for a military post was retained by the government. Excellent regimental instruction was also carried on at Stotsenburg, so that the tour of duty of the Fifth Cavalry there was of great value to both officers and men.

On June 6, 1903, headquarters, band, and Troops I, K, L and M, boarded the United States Army transport *Thomas* to sail for the United States, and the remainder of the regiment boarded the *Sheridan* for the same purpose on September 15th, arriving in San Francisco October 10, 1903.

The members of the Fifth Cavalry may well be proud of its service in both Porto Rico and the Philippine Islands. No other regiment can show a greater devotion to duty or a more honorable record.

STATIONS OF THE FIFTH CAVALRY NOVEMBER 10, 1898 TO
OCTOBER 1, 1903.

Band.—Nov. 14, 1898 to Aug. 3, 1900, Mayaguez, P. R.; Aug. 13, 1900 to March 10, 1901, Fort Myer, Va.; April 19, 1901 to Dec. 22, 1902, San Felipe Neri, P. I.; Dec. 26, 1902 to June 6, 1903, Camp Stotsenburg.

Troop A.—Sept. 1, 1898 to Feb. 1, 1899, Las Marias, P. R.; Feb. 1, 1899 to March 18, 1900, Arecibo, P. R.; April 2, 1900 to July 18, 1900, Jefferson Barracks, Mo.; July 22, 1900 to March 9, 1901, Fort Huachuca, A. T.; April 20, 1901 to May 15, 1901, Guagua, P. I.; May 15, 1901 to Jan. 22, 1903, Angeles, P. I.; Jan. 22, 1903 to Sept. 13, 1903, Camp Stotsenburg.

Troop B.—July 7, 1899 to March 15, 1900, Adjuntas, P. R.; Nov. 19, 1898 to Dec. 26, 1898, San Juan, P. R.; Dec. 27, 1898 to July 7, 1899, Utuado, P. R.; April 2, 1900 to July 18, 1900, Jefferson Barracks, Mo.; July 23, 1900 to March 7, 1901, Fort Grant, A. T.; April 20, 1901 to May 28, 1901, Guagua, P. I.; May 28, 1901 to Dec. 4, 1902, San Fernando, P. I.; Dec. 30, 1902 to Sept. 13, 1903, Camp Stotsenburg.

Troop C.—Feb. 13, 1899 to Feb. 12, 1900, Humacao, P. R.; Feb. 14, 1900 to March 24, 1900, San Juan, P. R.; April 2, 1900 to July 18, 1900, Jefferson Barracks, Mo.; July 21, 1900 to March 4, 1901, Fort Wingate, N. M.; April 19, 1901 to May 2, 1901, Angeles, P. I.; May 3, 1901 to July 20, 1901, Tarlac, P. I.; July 20, 1901 to June 12, 1902, Bayambang, P. I.; July 17, 1902 to Sept. 6, 1903, San Isidro, P. I.; Sept. 6 to 13, 1903, Camp Stotsenburg.

Troop D.—Nov. 14, 1898 to March 22, 1900, Mayaguez, P. R.; July and Dec., 1899, San German, P. R.*; April 2, 1900 to July 18, 1900, Jefferson Barracks, Mo.; July 23, 1900 to March 9, 1901, Fort Grant, A. T.; April 19, 1901 to May 25, 1901, Angeles, P. I.; July 24, 1901 to Dec. 14, 1902, San

Fernando, P. I.; Dec. 21, 1902 to Sept. 13, 1903, Camp Stotsenburg; May 26, 1901 to July 23, 1901, Penaranda.

Troop E.—July 1, 1899 to Nov. 28, 1900, Mayaguez, P. R.; Nov. 20, 1898 to July 1, 1899, also Nov. 1899, March and May, 1900, San German, P. R.*; March 7, 1901 to August 7, 1901, Fort Grant, A. T.; Dec. 6, 1900 to Feb. 26, 1901, Fort Ethan Allen, Vt.; Aug. 15, 1901 to June 21, 1902, Fort Apache, A. T.; Aug. 1, 1902 to Jan. 12, 1904, Angeles, P. I.; Jan. 12, 1903 to Sept. 13, 1903, Camp Stotsenburg.

Troop F.—Feb. 9, 1900 to Aug. 27, 1900, Humacao, P. R.; Feb. 8, 1899 to July 31, 1899, Bayamon, P. R.; July 31, 1899 to Feb. 9, 1900, also Aug. 28 to Dec. 15, 1900, San Juan, P. R.; Dec. 23, 1900 to Feb. 27, 1901, Jefferson Barracks, Mo.; March 3, 1901 to June 8, 1902, Fort Huachuca, A. T.; Aug. 1, 1902 to Sept. 5, 1903, San Isidro, P. I.; Sept. 6 to 13, 1903, Camp Stotsenburg.

Troop G.—Nov. 22, 1898 to Nov. 25, 1900, Albonito, P. R.; March 7, 1901 to March 23, 1902, Fort Grant, A. T.; Dec. 6, 1900 to Feb. 26, 1901, Fort Ethan Allen, Vt.; March 28, 1901 to June 21, 1902, Fort Apache, A. T.; April 12, 1902 to Sept. 7, 1903, San Mateo, P. I.; July 29, 1902 to Feb. 11, 1903, Pasay Barracks, P. I.

Troop H.—June 15, 1899 to Nov. 28, 1900, Mayaguez, P. R.; Sept., 1899 and Feb., 1900, San German, P. R.*; Feb. 12, 1899 to June 12, 1899, Arecibo, P. R.; Dec. 23, 1900 to Feb. 27, 1901, Jefferson Barracks, Mo.; March 1, 1901 to March 23, 1901, Fort Wingate, N. M.; March 30, 1901 to May 30, 1902, Fort Duchesne; Feb. 11, 1903 to Sept. 7, 1903, San Mateo, P. I.; July 29, 1902 to Feb. 11, 1903, Pasay Barracks, P. I.

Troop I.—Feb. 15, 1899 to Aug. 1, 1900, Ponce, P. R.; Aug. 13, 1900 to March 10, 1901, Fort Myer, Va.; April 22, 1901 to Oct. 31, 1901, Montalbon, P. I.; Oct. 31, 1901 to June 1, 1903, San Mateo, P. I.

Troop K.—Mar. 21, 1900 to Aug. 4, 1900, Mayaguez, P. R.; June 10 to July 10, 1900, San German, P. R.*; Nov. 22, 1898 to Feb. 17, 1899, Ciales, P. R.; Feb. 17, 1899 to March 17, 1900, Manati, P. R.; Aug. 13, 1900 to March 10, 1901, Fort

Myer, Va.; April 19, 1901 to Oct. 29, 1902, Pasig, P. I.; Nov. 1, 1902 to June 6, 1903, Camp Stotsenburg.

Troop L.—May 24, 1899 to Aug. 3, 1900, Mayaguez, P. R.; Nov. 24, 1898 to May 24, 1899, Las Marias, P. R.; Aug., 1899 and January and April, 1900, San German, P. R.;* Aug. 13, 1900 to March 10, 1901, Fort Myer, Va.; April 19, 1901 to April 24, 1901, Calocan, P. I.; April 24, 1901 to Dec. 22, 1902, San Felipe Neri, P. I.; Jan. 3, 1903 to June 6, 1903, Camp Stotsenburg.

Troop M.—Feb. 13, 1899 to Feb. 13, 1900, Cayey, P. R.; Feb. 16, 1900 to July 27, 1900, Manati, P. R.; Aug. 13, 1900 to March 10, 1901, Fort Myer, Va.; April 19, 1901 to June 1, 1903, Tanay, P. I.

* July, 1899 to July 1900, monthly detachment.

ROMANCES OF TWO WARS.

BY MAJOR J. A. WATROUS, UNITED STATES ARMY.

“HOW does it happen?” asked the veteran General, “that some of the sweetest, prettiest stories born of war experiences are never told?” Everybody at headquarters gave it up, but the Chief Quartermaster believed that the old General had a good story up his sleeve and proceeded to probe for it. After fresh cigars had been lighted, the Quartermaster intimated that probably the reason why some of the sweetest and prettiest stories of war times had failed to materialize was because those who were familiar with the facts had bottled them up, had selfishly retained them, thus cheating the public. Then glancing at the staff and visiting officers, remarked, “It is my impression that the General has such a story laid by. It is our duty to the reading public to insist that he relate it.”

Everyone in the room except the General sided with the Chief Quartermaster. The story was loudly called for. After two or three puffs and a prolonged look at the ceiling, the old General said: “I am guilty, gentlemen; I do know such a story. If I can get the promise of my distinguished staff that it will behave itself in the future, do its work without annoying me, I will relate it.”

“Gentlemen,” said the Chief Paymaster, “Isn’t the story going to be rather too rich for our blood? Doesn’t it come too high? At that price it ought to be a mighty good story.”

“It is a mighty good story, and I am going to tell it. Lock the door. Let no guilty man escape.”

“It is a long jump from the Pasig River, in the Philippines, to the Rappahannock River near Fredericksburg, Virginia, but it must be made.

“I was a newly made sergeant when Burnside crossed the Rappahannock River and threw his legions against Lee,

Jackson and Longstreet and their magnificent tribes of fighters in December, 1862. If you have read history you know that we remained on that side of the river until the night of the 16th. How well I remember that it was as dark as any night Egypt ever had. Whispered orders came to us to fall in and march with the least possible noise. Just at daybreak the last of the Army of the Potomac crossed the river, escaped, providentially, I have always thought, and during the day went into camp in the forests back of Stafford Hills. I had been given a peck on the shoulder from a minie ball, though it had not sent me to the hospital. The next day after we went into camp the captain excused me from duty, as he did a corporal, a special friend of mine, who had received a slight flesh wound in the arm.

“Having nothing to do, we two noncommissioned officers took a walk. Half a mile from camp we came to a small clearing in the center of which stood a little dwelling. We were both hungry and decided to enter and ask the inmates to prepare a substantial meal. In this humble Virginia home was a most hospitable family consisting of an aged father and mother and two daughters, young ladies, Lottie and Martha. Certainly they would prepare a dinner for us, the best they could, though the best would not be very enticing, they feared.

“While the young ladies were preparing the repast, the father and mother talked with us about the recent battle. They spoke of a son who belonged to Perham’s battery.

“‘We remember that battery,’ I said, ‘for it had a position on our left and gave us a raking fire the better part of two days, doing much execution.’

“All four of our newly found friends were out and out Confederates, but, like all Virginians, hospitable. We talked on all of the subjects with which we were familiar, spending three or four hours with the interesting couple and their daughters. Both daughters were very good looking. Lottie had dark hair, brown eyes, beautiful complexion, a fine form, and had attended the best school in Fredericksburg several terms, and was well informed.

"My associate, the Corporal, insisted on our returning a few days later for another visit and another dinner. We did, and we returned again and again. I could see plainly enough that the Corporal and Lottie were falling in love in spite of the fact that she was a sharp-tongued little rebel and he as patriotic and country-loving a young Yankee as I ever met.

"While returning from one of our visits a few weeks later, the corporal imparted to me that he had proposed to Lottie. She had been frank to say that she loved him dearly, but believed that it was not best for them to become engaged at such a time. 'You are my enemy; you are fighting my country; you are fighting my brother, my only brother,' said the little black-haired Confederate. 'If, at the end of the war, we still feel as we do towards each other, I promise, gladly promise, to become your wife.'

"'Nothing,' said the Corporal, 'could induce her to change her mind.'

"Three years from that time (you will remember it was not far from Christmas), I met the Corporal in Chicago. Both of us had become officers in the regular army (lieutenants). I was spending my leave in that city and he was passing through to spend his leave in and about Fredericksburg, Virginia. By correspondence they had settled the question which he could not settle three years before.

"'Congratulate me, Lieutenant, congratulate me. I am going down to marry Lottie, our sweet little Virginia friend. She is coming back with me.'

"He kept his word. The next year I married. The Lieutenant, whom I will call Jim, and his Virginia wife, were always represented as about as happy a couple as ever met. Of course, I was always interested in her, though we did not meet for twenty years after we said good-bye, in June, 1863, when our command left the vicinity of Fredericksburg and took up its line of march to Gettysburg. Gentlemen, what history our little army has helped to make since that parting in June, forty years ago!

"Just before the battle of Chancellorsville, in May, 1863, our command had a fierce battle at Fitzhugh Crossing. We

charged across the Rappahannock in boats, pushed up the high bank and took the enemy's line of works and made most of his force prisoners. That night Jim and I were on picket. The lines were very close together. The Confederates made a dash at us in overwhelming numbers, capturing a good share of the line, including Jim. I managed to get word back to Lottie that her lover was a prisoner. The next day the little lady came to our lines and was conducted to the grizzly old colonel commanding the brigade, to whom she made known her plan to bring Jim back into the Union lines. 'I have a brother not far from where the Corporal was captured. If you will permit me to send this letter through your lines I am confident that he will see that the Corporal comes back to-night.'

"The General took the letter, read it, handed it back and told Lottie her request would be complied with.

"That night a letter was placed in charge of the officer commanding the picket with instructions to send the secret service man, who gave it to him, through the lines in search of Sergeant John Lott, of Perham's battery.

"I do not pretend to know just how they managed, but I do know that Corporal Jim was in camp for breakfast the next morning. That evening he was given permission to spend an hour at the home of his Virginia friends. He told me the next morning that Lottie spent most of the hour in chiding herself for recruiting the Yankee army by stealing a prisoner from the Confederates.

"Jim's first boy was named for me and my first boy was named for Jim. When the trouble in the Philippines came, Jim and myself were ordered out. As you know, I have a son in the regular army, a lieutenant. So has Jim, and their regiments came to the Philippines soon after their fathers came. Jim's family made all arrangements to follow him as soon as it would be safe for them to do so. They settled in a pleasant home in San Francisco and watched for the opportunity to come. They were there when my son's regiment reached the Presidio. A week later Jim's regiment arrived. Both had been at West Point together, and of course it was not long before they met and it was the

most natural thing in the world for Jim to invite my son to become a guest of his mother and sisters as often as he could be spared from his duties. It was also natural for him to accept. Oh, yes, of course, that boy of mine fell in love with one of Jim's daughters; her name was Lottie, too, and she has black hair and brown eyes and is altogether a very lovely girl. She is my daughter-in-law now."

At this point the old General fixed his eyes on the ceiling.

"Is that all the story, General?" asked the Chief Commissary.

"No, it is not all. While my boy was courting Jim's boy's sister, Jim's boy was writing letters to my flax-haired girl back in Illinois. Jim's boy became my son-in-law last year."

"You haven't told us who Jim is, General."

"That's so. You just watch the next list of brigadiers the President sends out and you will find Jim's name in it."

It was there.

So ended the old General's romances of two wars.

THE GENERAL SERVICE AND STAFF COLLEGE.

ADMINISTRATION.

ALL army officers of more than eight years' service are familiar with the history of the old Infantry and Cavalry School, which was instituted in 1881 and continued until the breaking out of the Spanish-American War in the spring of 1898, and all officers who have joined since the latter date are sufficiently familiar with its history and workings to make it unnecessary to go into the details of its past seventeen years' work.

When the unsettled conditions resulting from the Spanish-American War and the Philippine Insurrection began to disappear in 1901, Mr. Root, ably supported by those officers who were familiar with the work and results of the Infantry and Cavalry School and who were anxious to see it started again, set about the reorganization of our army educational system, the result being the Post School, the General Service and Staff College, and the War College. The functions of the War College were somewhat hazy and indefinite, but the General Service and Staff College supplanted the old Infantry and Cavalry School, and was intended, when G. O. 155 of 1901 was originally issued, to eventually be a school for the education of all branches of the service—a "General Service" School *de facto*—the course to be two years.

After one year of experimental work and the graduation of the class of 1903, those most interested in the school's welfare began to devise schemes for extending the preliminary one year's course to the originally intended two years.

The engineers already had their School of Application at Washington; likewise the medical corps; and the artillery had two schools, a preliminary one at Fortress Monroe and

its post-graduate one at Fort Totten. This made the "General Service and Staff College" a misnomer, for it was really only an "infantry and cavalry school" as of old. This led to a second reorganization of the whole army educational system by the General Staff, the result of which is G. O. 115, War Department, of 1904.

There are now at Fort Leavenworth (or will be as soon as the Signal School is inaugurated) three army schools: The Infantry and Cavalry School, at which officers of those two branches of the service study the duties of those two arms in war. The course is one year.

The Signal School, where junior officers of the Signal Corps and lieutenants of the line study practical and theoretical signal work for one year.

The Staff College, where a limited number of selected graduates from the Infantry and Cavalry School and from the Artillery and Engineer Corps study the duties of General Staff officers in time of war, and to investigate such military inventions, discoveries and developments as effect the efficiency of their arms of the service in war. The course is one year.

The commandant of the Staff College "shall be an officer not below the rank of colonel, especially selected for the duty, and detailed in orders from the War Department." He is also commandant of both the Infantry and Cavalry School and the Signal School.

The assistant commandant of the Staff College is likewise assistant commandant of the Infantry and Cavalry School, but the Signal School has an assistant commandant of its own, "who shall be an officer of the Signal Corps."

The instructor, or head, of a department in any one of the schools has charge of that department in either one or both of the others schools in which his subjects are taught, but each school has its corps of assistant instructors separate and distinct from those of the other schools.

All officers at these schools, whether as members of the college staff or as student officers, have no post duties whatever, the duties of post and college being separate and distinct, with the exception of the commandant and post com-

mander, who are required by regulations to consult with each other in all matters of post administration affecting the interests of the school.

As a matter of fact, the commandant of the schools has an interest in all post administration and garrison work in so far as it relates to the schools in any way, and is consulted by the post commander in all such matters. On the other hand, the post commander has control of all post administration, instruction, drills, etc. Official correspondence between the schools and the War Department passes direct from the commandant to the military secretary, and all matters pertaining to the schools and the courses of instruction therein are exclusively under the control of the War Department.

All matters pertaining to the internal administration of the schools, the allotment of hours to the various departments, the arrangement of the periods for practical work, etc., are regulated by the Academic Board of each school, which board consists of the assistant commandant, the secretary, and the instructors in charge of departments, all of whom have a vote except the secretary.

The duties of the assistant commandant are to preside at all meetings of the Academic Board, supervise the methods of instruction in the various departments, visit the section rooms and lecture room during lectures, observe the outdoor practical work, and, in general, keep in close touch with all of the school and college work, both theoretical and practical, and keep the commandant fully informed in reference thereto.

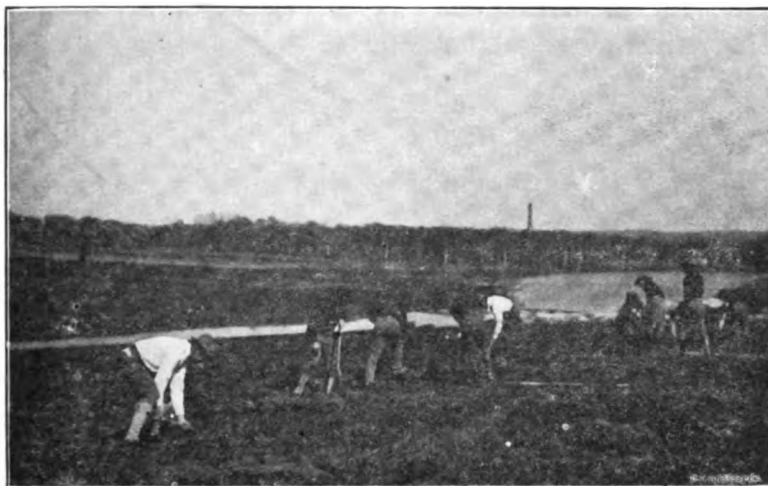
The commandant does not sit with the Academic Board during its deliberations, thus leaving himself free to approve or veto any measure passed by the board.

The duties of the secretary are practically those of an adjutant general, in addition to which he has the disbursement of the college allotment, and is responsible for all school property and for the library, which now contains about 14,000 volumes. He also has charge of the college printing office and the book bindery.

COURSE FOR 1903 TO 1904.

The course of 1903 opened September 14th with an address by the commandant to the entire class. Studies were commenced the next day in three departments: tactics, engineering and law. In the department of hygiene recitations did not commence until the second term.

The school year was divided into two terms; the first from September 15 to December 21, 1903; the second from January 4 to June 27, 1904. The two departments of tactics and



DIGGING TRENCHES.

engineering, to which most of the time was devoted, continued their work almost uninterruptedly throughout the year.

Ordinarily recitations were held in tactics from 9 to 10 A. M. for the first half, and from 10 to 11 A. M. for the second half of the class. The hour from 11 A. M. to noon was utilized for recitations in law for the two halves of the class alternating, or this hour was used for lectures for the entire class. Ordinarily recitations in engineering were held from 2 to 3 P. M. for the first half, and from 3 to 4 P. M. for the second half of the class. This arrangement gave each student officer two recitations in one day, and three on the next.

Practical work in the departments was usually divided into half days, but often an entire day was devoted to one problem. The half day consisted of the morning hours 8 A. M. to noon, or the afternoon hours 1 to 5 P. M. In case a problem required more time the students would remain out all day, notice being previously given, so that a lunch might be provided.

The class was divided into eight sections, each of about twelve students. This division was made alphabetically for the first term, and after January 1st according to standing at the end of the first term. The class consisted of ninety-one student officers, of whom twelve reported some time after the opening of the course.

DEPARTMENT OF TACTICS.

The course in this department was divided into five parts, of which security and information and hippology were finished during the first term, and organization and tactics, strategy, and field exercises occupied the second term.

Security and Information.—Instruction in this branch comprised lectures, advance and review recitations, section room problems, map problems, terrain walks, patrolling with troops, and preparation of problem. There were eleven advance and five review lessons in the authorized text book, "Wagner's Service of Security and Information." Each advance lesson comprised about twenty-four pages; each review lesson some fifty pages of the text. These recitations were conducted in the manner familiar to all. The following rules governed:

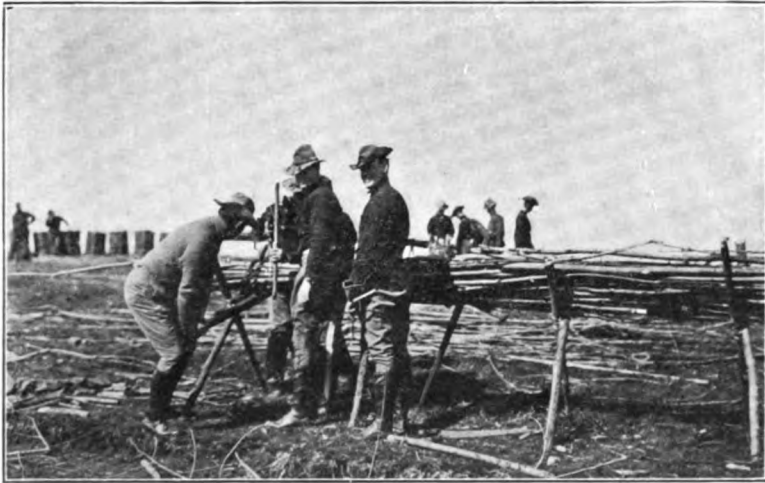
Recitations will begin by calling the roll of the section, each officer present, as his name is called, answering "Present," or "Here." This requirement will also apply to assemblages of the class, or portions of it, in the lecture or drafting rooms, or wherever necessary at outdoor practical work.

For the first ten minutes of the recitation hour, and no more, student officers will be permitted to ask questions about any portion of the lesson which is not understood.

Questions so asked must be explicit and addressed to definite points in the lesson of the day.

A student officer called up to recite will be given a topic or series of topics, either in writing or orally. These he will write on a blackboard, with synopsis, or outline of headings, with sufficient notes to fix the attention and serve as a guide during recitation.

In all work at the blackboard the name of the student officer will be placed in the upper right-hand corner of his board.



CONSTRUCTING FASCINE.

All work submitted on paper will be dated, and signed with name and rank in the lower right-hand corner.

For problems, all of the work involved, including computations and constructions, will be placed on the board or paper; results alone are not sufficient.

When problems of computations to be worked on paper are given, the student officer will sign his name and rank in the right lower corner and place his work on the assistant instructor's desk as soon as completed.

When prepared to recite at a blackboard, a student officer will take his seat until called upon by the assistant instructor to recite.

When called upon to recite, the student officer will hand in his slip, if he has received one, and will commence his recitation by announcing his subject as follows: "My subject is," etc., giving a terse statement of the subject which in his opinion embraces the topics assigned to him.

During the recitation he will stand in a soldierly position, habitually facing the instructor, glancing, when necessary, at the board, and indicating with the pointer the matter under discussion. When not in use for indicating, the pointer will be held in the position of "order arms" of the saber.

Any student officer who has prepared a board and has not been called upon to recite when the section is dismissed, will, before leaving the section room, write his subject at the top of the board.

Pronunciation, spelling and correct use of language and punctuations are considered in estimating the value of a recitation or an examination, and so also is the manner of delivery. Clear and concise statements indicate well formed and positive ideas, while indefinite and general statements indicate hazy ideas and will be valued accordingly.

The greatest difficulty encountered in the recitations was the size of the sections (twelve) and the limited time devoted to each recitation (one hour). This left only about four minutes for the work of each student officer, by no means enough to thoroughly instruct on the subject. In this limited time only a hearing of the text could be undertaken, and this is not a satisfactory method. There were four assistant instructors for this work, each one taking two sections daily. In future classes the size of the sections will be reduced by about one-half, so that more time can be devoted to each student and to the subject. Furthermore, since this branch is more or less thoroughly studied in the post school course, it is the intention to do away with formal recitations and replace them by quizzes, preceded by lectures that will treat of the subject more generally and broadly.

As an accompaniment to and for the purpose of rounding out the recitations, there were given out at the beginning of each recitation what were known as "section room problems."

These problems were drawn up by the instructor and so designed as to apply the principles laid down in the day's lesson. For the subject of patrolling, for example, the section room problems were taken from Captain Dickman's lecture on "Patrolling." This excellent lecture was published in No. 40 of the CAVALRY JOURNAL, and a perusal of the problems given there will afford an excellent idea as to the kind of section room problems utilized in the course.



CONSTRUCTING GABION.

Such problems were usually given to two students in each section, and whenever possible the answers submitted were looked over and criticised in the presence of the section before the time of dismissal. At first many of these problems were solved on maps directly; later on a larger scale map with a plate of glass superposed, and finally the large scale maps were placed in a frame under glass on the wall, and students required to make their dispositions directly thereon. A brush and India ink was used for this purpose and worked well. Later slightly ground glass plates were substituted for the plain ones, and on these it was easy to mark in the differently colored lead pencils. The solution thus could be seen by the entire section, and instruction was imparted to all.

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The drawback in this method again is the lack of time. As there were only sixteen recitations, each student had but three such problems. When the latter method was adopted all got the benefit, however. There should be sufficient time for the solution and for subsequent discussion and criticism.

The practice in these section room problems was very useful when the map problems were taken up, which was the next step in the instruction.

For the solution of these problems the entire class was assembled at 8:30 A. M. A sample of such a problem is here reproduced :

PROBLEM NO. 1. SHEET NO. 1.

(INFANTRY.)

SECURITY AND INFORMATION.

EXERCISE IN PATROLLING ON THE MAP.

General Idea.

A large column of troops of Blues is advancing along the road—Colchester—Hinesburg—Fay's Corners—Swanton.

An inferior force of Browns is supposed to be on the general line—York Hill—Charlotte—Winston Woods.

Special Idea (Blue).

The advance guard consists of two battalions of infantry (800 men). The reserve of the advance guard (one battalion of infantry, 400 men) has arrived at the forks of the road 150 yards northeast of Section House No. 2 at the southwest entrance to the tunnel northeast of Colchester. The commander of the advance guard (marching with the reserve) orders you to take a patrol toward the right flank of the column for the purpose of establishing and keeping contact with the enemy.

Note: This sheet and a map to be give to student at beginning of exercise 8:40 A. M.

SHEET NO. 2.

The solution to the following questions must be handed in to the instructor at 9:40 A. M.

Question No. 1.

- (a) Write out the orders that the commander of the advance guard should give to this patrol.
- (b) How many men will you take, and why?
- (c) What inspection of the men composing the patrol do you make?
- (d) What route will you take?
- (e) What formation will you give to the patrol?
- (f) Draw on the map the position of the advance guard and of the patrol at fifteen minutes after leaving the forks of the road.

Note: This sheet to be given to the student at 8:50 A. M.

SHEET NO. 3.

Special Idea (Blue) Continued.

Your patrol has arrived at the bridge across Sucker Brook near Section House No. 4. No enemy has been seen, but inhabitants on the road say that small parties of Browns were in the locality earlier in the day.

The solution to the following questions must be handed in to the instructor at 10:00 A. M.

Question 2.

- (a) Write out the message you would send in concerning the information gained from the inhabitants (on message blank).
- (b) What route do you now select for your patrol?

Note: This sheet and a new map to be given to the student at 9:40 A. M.

SHEET NO. 4.

Special Idea (Blue) Continued.

Your patrol has advanced to the clump of trees south of and nearest to the town of Charlotte. About 1,500 yards to the east you have seen several small parties of the enemy

(Browns) and inhabitants report the enemy in force to the north.

The solution to the following questions must be handed in to the instructor at 10:30 A. M.:

Question 3.

(a) How would your patrol proceed now? What route would you choose? How is the town of Charlotte passed?

(b) The reserve being at Hinesburg, would you have a connecting file? If so, where would he march?

(c) Write the message you would send at this time (on a message blank).

Note: This sheet is to be handed to the student at 10 A. M.

SHEET No. 5.

Special Idea (Blue) Continued.

Your patrol is in the clump of trees just south of Booth's Mill. You have observed two hostile infantrymen in the clump of trees east from Section House No. 2 at contour 340 at edge of map. You also observe infantrymen (evidently two) in the southern edge of Winston Wood.

The solution of the following questions must be handed in to the instructor at 11 A. M.:

Question 4.

(a) What do you conclude from your observations?

(b) Write out the message you would send (on a message blank).

(c) How will you send the message?

(d) What route should be followed by the messenger to reach the reserve at the copper mines?

(e) Do your messengers return to you?

Note: This sheet to be handed to the student at 10:30 A. M.

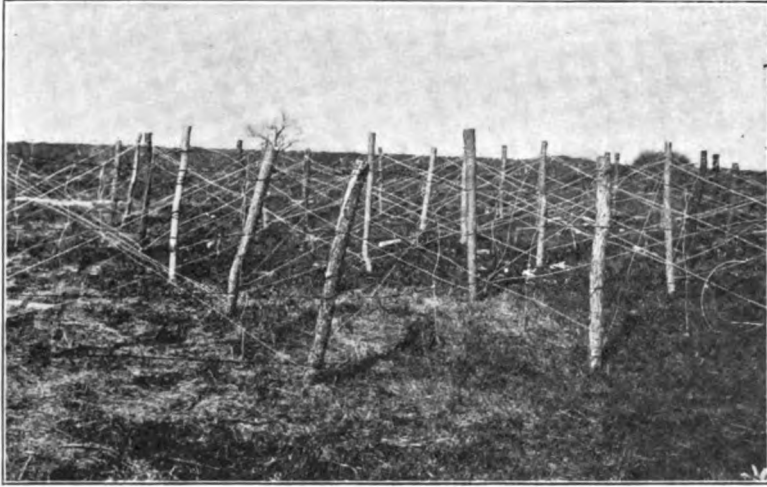
SHEET No. 6.

Special Idea (Blue) Continued.

Your patrol has reached the cut in the road east of Addison, and you receive word that your own column has halted

for the day. The entire advance guard (800 men) is to camp at Fay's Corners, and, independently of the main body, is to cover its front (to the north) and its right flank (to the east) by an outpost.

The solution of the following questions must be handed in to the instructor at 11:50 A. M.:



HIGH WIRE ENTANGLEMENT.

Question 5.

- (a) What should your patrol do now?
- (b) When will your patrol return to its company?
- (c) Indicate on the map the position for the outpost under the assumption that the two battalions post their own, their rear being guarded by the main body.

Note: This sheet to be given to the student at 11:00 A. M.

The map used in this connection is the one reproduced in No. 40 of the CAVALRY JOURNAL.

The plan of dividing up the problem into sheets was intentional, and was done for the purpose of making the problem a continuous one, and yet limit the time devoted to any part. In practical tactics time is an important element, and it was sought to introduce this element into the map problems, which are necessarily largely theoretical.

As seen from the notes on the various sheets the solutions required had to be handed in at the end of a certain period. This had the further advantage of allowing the problem to be continuous just as the work of the patrol would be in actual practice. To issue all the sheets would have directed the solutions in one channel, that is, the one conceived by the author of the problem. It was sought by this plan to approximate closely to the actual conduct of the patrol in the terrain. There is another obvious advantage in this system of elements for problems, viz: the students, after handing in their answers, obtain a partial solution of the previous elements in the special idea of the next sheet, and this brings all the students back to the same starting point. For individual instruction this is not necessary or even desirable, but where so many work together and their solutions must be considered together, this is the only practical means. Another method out of the difficulty would be to give a series of short problems wholly independent of each other, but in this case the interest cannot be maintained.

This system of subdividing problems into elements according to time was used wherever practicable throughout the course. A test of the method is all that is necessary to recommend it, and the writer believes it is capable of much wider application, as for example, to maneuvers with troops.

The solutions to these problems were carefully considered by the instructor, and when all had been marked, the class was assembled for a discussion of the problem. Good solutions and erroneous ones were shown and illustrated on the maps. The principal errors were pointed out and the principles upon which the solutions rested again rehearsed. This course was a good one, and had the direct result of connecting the text and the principles therein enunciated with practice under certain assumed conditions.

The difficulties encountered in the course were due mainly to a lack of knowledge in map and contour reading, but the exercise gave splendid instruction in this valuable branch. Improvement in the course can be made by devoting time, which was unfortunately not available, to in-

dividual solutions, and explaining each student's errors to him in person.

The next step after the map problems was to take the students on the terrain and repeat the same or similar exercises, still however without troops. For these terrain walks as they were termed, twelve student officers were grouped under an instructor and a half day devoted to a walk of about four miles.

An example of one of these problems here follows. Similar ones can be made to suit the terrain.

PROBLEM No. 4. SHEET NO. 1.

(INFANTRY.)

SECURITY AND INFORMATION.

EXERCISE IN PATROLLING IN THE TERRAIN WITHOUT TROOPS.

General Idea.

A column of troops (Blues) is on the march from the north on the road through the post of Fort Leavenworth via the cemetery, Hancock Avenue, Garden Road, Atchison Cross.

Mounted patrols and detachments of the enemy (Brown) have been reported in the city of Leavenworth.

Special Idea (Blue).

The advance guard of the Blues consists of one battalion of infantry (four companies of 100 men each). The support of this advance guard consisting of one company of infantry has arrived at the junction of Pope and Hancock Avenues. You have been previously detached as an intermediate flank patrol. A large patrol is operating along the river road. You have arrived at North Merritt Hill and your orders are to advance along Grant Avenue to South Merritt Hill.

The solution to the following questions must be handed to the instructor fifteen minutes after receiving this sheet.

Question No. 1.

(a) How many men should you have in the patrol, and why?

As seen from the notes on the various sheets the solutions required had to be handed in at the end of a certain period. This had the further advantage of allowing the problem to be continuous just as the work of the patrol would be in actual practice. To issue all the sheets would have directed the solutions in one channel, that is, the one conceived by the author of the problem. It was sought by this plan to approximate closely to the actual conduct of the patrol in the terrain. There is another obvious advantage in this system of elements for problems, viz: the students, after handing in their answers, obtain a partial solution of the previous elements in the special idea of the next sheet, and this brings all the students back to the same starting point. For individual instruction this is not necessary or even desirable, but where so many work together and their solutions must be considered together, this is the only practical means. Another method out of the difficulty would be to give a series of short problems wholly independent of each other, but in this case the interest cannot be maintained.

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The solution to the following questions must be handed to the instructor fifteen minutes after receiving this sheet.

Question No. 1.

(a) How many men should you have in the patrol, and why?

(b) What will be the formation and position of your patrol while you are in observation on North Merritt Hill?

(c) How do you proceed to South Merritt Hill? (Indicating how the patrol will advance.)

This sheet to be given to the student on arrival of the party on North Merritt Hill.

SHEET No. 2.

Special Idea (Blue) Continued.

You are on Grant Avenue at the outlet of Merritt Lake, and a countryman coming from the south is brought to you. He states that there are a number of Brown cavalrymen in the city of Leavenworth, and he saw several parties of three or four mounted men near Metropolitan Avenue.

The solution to the following questions must be handed to the instructor fifteen minutes after receiving this sheet.

Question 2.

(a) State what questions you would ask this man.

(b) What would you do with him?

(c) Write out the message you would send to your superior (on a message blank).

This sheet is to be given to the student at Merritt Lake on Grant Avenue.

SHEET No. 3.

Special Idea (Blue) Continued.

You have arrived on South Merritt Hill with your patrol.

The solution to the following questions must be handed in to the instructor twenty minutes after receiving this sheet.

Question 3.

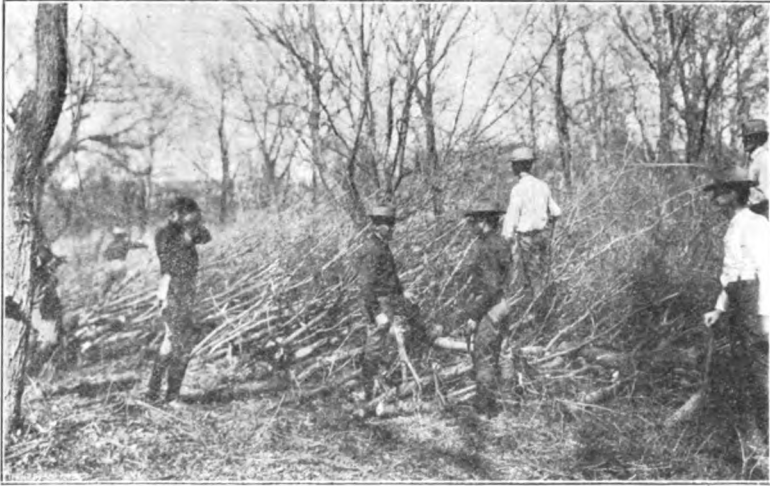
Give a simple description of the terrain to the south and southwest.

This sheet to be handed to the student on arriving on the southern point of South Merritt Hill.

SHEET No. 4.

Special Idea (Blue) Continued

The patrol has arrived at a point on Grant Avenue half way between Pope Hill and the bridge over Corral Creek. Your point has reported to you that he saw four mounted men of the Browns going south near Grant Hill and you yourself see several mounted men (Brown) disappearing to the south to the right of that brick house.



CONSTRUCTING ABATIS.

The solution to the following questions must be handed in to the instructor twenty minutes after receiving this sheet.

Question 4.

- (a) What do you conclude from the information gained?
- (b) What will you do now?
- (c) How do you proceed?
- (d) Write out the report you would send to your superior (on a message blank).

This sheet to be handed to the student on arrival on Grant Avenue half way between Pope Hill and the bridge over Corral Creek.

PROBLEM NO. 4. SHEET NO. 5.

(INFANTRY.)

SECURITY AND INFORMATION.

EXERCISE IN PATROLLING IN THE TERRAIN, WITHOUT TROOPS.

Special Idea (Blue) Continued.

You have arrived at the bridge on Grant Avenue over Corral Creek.

The solution to the following questions must be handed in to the instructor twenty-five minutes after receiving this sheet.

Question 5.

Write a description of the bridges at this point.

This sheet to be handed to the student on arrival on Grant Avenue on the bridge over Corral Creek.

PROBLEM NO. 4. SHEET NO. 6.

(INFANTRY.)

SECURITY AND INFORMATION.

EXERCISE IN PATROLLING IN THE TERRAIN, WITHOUT TROOPS.

Special Idea (Blue) Continued.

Estimating the strength of marching columns, etc.

The solution to the following questions must be handed in to the instructor thirty minutes after receiving this sheet.

Note: In estimating strength make no allowance for opening or tailing out.

(A battery of light artillery has eighteen vehicles, guns and carriages.)

Question 6.

You observe a body of infantry in columns of fours on the road with the head on line with target range house and the end at the garden house at edge of wood near cemetery.

(a) How many men in the column?

You observe a body of cavalry in column of twos on the road with the head on line with target range house and the end just coming over crest of hill to right of railway cuts.

(b) How many troopers in the column?

You observe a body of troops marching along the garden road and mark the time it takes to pass that clump of trees under railway cut. Infantry in column of fours six minutes, followed by artillery in route march fourteen minutes, followed by cavalry in column of twos sixteen minutes, followed by infantry in column of fours eighteen minutes, followed by a wagon train nineteen minutes.

(c) How many infantry, cavalry, guns and wagons are there in the column?

(d) What organizations are they most likely to be?

(e) How long is the entire column?

This sheet to be handed to the student upon arriving at Grant Hill.

The terrain walks were of great benefit and were later extended so as to give more practice. Improvement on the method in use is possible if more time is available. If only two or three students go with each instructor, the solution may be given by the student verbally and errors pointed out at the time. This method takes much time, but will be the ideal one for such instruction.

When a student has solved a problem, he is not so much interested in the solution of others. What he wishes to know is "why his solution is not correct and good." By taking his solution and pointing out the manifest errors, more good will be accomplished than by announcing a model solution, no matter how carefully this model may have been worked out. In this instruction we must recognize the principle that tactical solutions depend upon circumstances. Of these circumstances the personality, or better the "personal equation," of the student is one of the most important. To hold up a model solution involves the disregard of this "personal equation." If this principle is recognized, it is seen that in tactical problems individual instruction is the only method that will bring forth the best result. This applies in a lesser degree to all instruction, but for tactical problems has an immense weight.

The next step in the course was "Patrolling with

Troops." A general idea was formulated upon which as a framework all the separate premises were formed.

The general idea was the same for all patrols, each taking a separate route, so that twelve patrols, each under an instructor as umpire, could be sent out each half day.

The following is the general idea used for these patrols.

PROBLEM NO. II. SHEET NO. I.

SECURITY AND INFORMATION.

EXERCISES IN PATROLLING ON THE TERRAIN WITH TROOPS.

General Idea.

A large column of Blues is advancing in Missouri from the east toward Fort Leavenworth, with the intention of occupying that place. The advance guard has reached the Rock Island bridge and encountered no opposition.

A force of Browns is known to be advancing from the south of the city of Leavenworth, from the direction of the Frenchman's, and from the direction of Kickapoo, but his exact location is unknown and no patrols have been seen.

Special Idea (Blue).

The support of the advance guard of your force has just crossed the bridge, and the commander of the advance guard, who is with the support, has sent out six patrols in various directions to reconnoiter the terrain, and, if possible, to establish contact with the enemy and keep it.

You are in charge of one of these patrols and have orders as follows:

You will establish contact with the enemy and keep it. What is known of the enemy is indicated above.

As the terrain, I will furnish you with this map (Ft. L.). The direction will be so as to cover the ground on the map enclosed in the red lines drawn thereon (your own sector).

Other patrols will be in the territory adjacent to yours, one on your left and one on your right, and will reconnoiter the territory up to the lines limiting your sector.

You will remain out until ordered in by the umpire.

All messages and reports will be sent to me at Sherman Hall or handed to the instructor if present.

This sheet to be handed to the student at assembly.

This exercise was given simply to serve as a model or suggestion for student officers in the instruction of their noncommissioned officers when they again joined their organization. If time permitted, more of these exercise could be added to advantage, but even the one undertaking will



GABION AND SAND BAG REVETMENT.

serve a useful purpose. To afford each of the ninety-one student officers an opportunity to command a patrol, devolved an abnormal amount of work on the instructors, and an increase in the number of exercises, was precluded on account of the lack of umpires.

Other practical work with larger forces was postponed until the second course, so as to give the students instruction in tactics. These problems included outposts, advance and rear guards and cavalry screen.

Soon after the practical exercises each student was required to submit a thesis on the course. It has usually been the rule to allow each student to select his own subject for this thesis, but a new method was inaugurated. One theme was chosen by the instructor for all students as follows:

THESIS.

Security and Information.

In accordance with Par. 25, Regulations and Program of Instruction of the General Service and Staff College, published in G. O. No. 90, A. G. O. 1903, a thesis of not less than 2,000 nor more than 5,000 words will be prepared by each student officer and handed in to the instructor of the Department of Tactics not later than noon, December 21, 1903.

BY OFFICERS OF INFANTRY.

Subject of Thesis.

Method best suited in the United States army for imparting practical instruction in Security and Information to the noncommissioned officers of a company of infantry, including a scheme for progressive exercises on the subject.

BY OFFICERS OF CAVALRY.

Subject of Thesis.

[Same as above, but for troop of cavalry.]

The work of the student class in these theses was exceptionally good. Two of the theses were published in the CAVALRY JOURNAL, the first by Lieutenant Masseur in the April 1904 number; the second by Captain Craig in the July 1904 number.

A written examination on the subject completed the course. The results of this examination were remarkably satisfactory. A high standard was set for subsequent classes at the school.

Hippology.—This course embraced lectures, advance and review recitations, practical demonstrations and practical tests, riding lessons and a written examination. Recitations were conducted in the usual manner, except that each day three students from each section were sent to the riding hall where recitations were held, using the actual horse in the demonstrations. Then each student had some few recitations which were conducted by the senior assistant instructor and the veterinarian. The only improvement that sug-

gests itself in regard to these recitations is to hold them all in the practical manner indicated above. This cannot be done throughout the course, but much will be gained by having the subject before the student. A certain number of theoretical recitations are necessary, but they should be reduced to the minimum.

The lectures were so arranged as to keep in touch with the advance in the book. They covered the entire course and were of great benefit. A careful preparation of lectures will afford an opportunity of curtailing much of the theoretical work in the book, and allow cutting out certain chapters from recitations. It would not do to neglect these chapters entirely.

The practical demonstrations were given so as to keep pace with the program in the text. It is difficult always to arrange a course so as to have first a lecture, then a recitation and then a practical demonstration, with so large a class and so limited a number of instructors, but the sequence of instruction was adhered to as closely as possible.

There were two practical tests of the knowledge acquired. The first was determination of age by examination of teeth. Each student officer was required to record the age of three horses, and it was remarkable how closely the results approximated to the recorded ages of the horses. The second test was an examination for soundness and conformation. Each student officer had to report upon three horses, as to their serviceability for the service. The results were well worth the time spent upon this branch of the subject.

The riding lessons were pursued under some difficulties. The class was large, the time of the students was already crowded, and only a small riding hall was available, which had to be used by eleven organizations at the post. Several innovations were made in this course. Whitman saddles were procured, with the idea of teaching a better seat. Great attention was paid to this feature and to giving officers a presentable appearance on horseback. It is contemplated to establish a mounted service detachment separate from troops at the post, and to provide a better class of mounts. Besides these improvements, addition of another riding hall

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to the equipment of the post will afford better opportunity for instruction in riding.

The written examination in hippology completed the first term, after which a vacation was granted to all student officers until January 4, 1904.

During the second term more time relatively was assigned to the Department of Tactics.

Organization and Tactics.—This course comprised lectures, recitations, section room and map problems and practical work.

The attempt was made to bring the problems and the recitations together, so that application went hand in hand with theory. To do this the course was thoroughly mapped out, and a schedule of recitations, lectures and problems for the entire term was prepared. There were twelve problems in all relating to the subjects in the book. The problems were in pairs and embraced the following: Organization; infantry in attack and defense; cavalry in attack and defense; artillery in attack and defense. The arms combined in attack and defense and convoys. In each series two problems were solved, the first a preliminary one which was given out as soon as the subject was finished in the text book. The solutions to this problem were carefully scrutinized, and then a discussion followed pointing out the errors and discrepancies. As soon as practicable after this discussion the record problem followed, the solutions to which were marked and used in grading the students in their standing. For these problems the West Point, Kentucky, maneuver map was usually used.

Great attention was paid to the writing of orders, and models of various kinds of orders were furnished, of which the following is a specimen for a march in advance of a force composed of all arms.

FIELD ORDERS,) No. } TROOPS.	PLACE	DATE.	HOUR.
1. <i>Advance Guard</i> (C. O.) Cavalry. Infantry. Artillery. Engineers. Hospital Corps (rarely).			1. Information as to the enemy, and <i>our other forces</i> . 2. <i>Intentions of the Commanding Officer.</i> (In the most general terms.) 3. (a) <i>Order for the advance guard.</i> (Time of starting; place whence it will start; road by which it will march; reconnaissance to be made; communication to be maintained with parallel columns, etc.; special duties.) (b) <i>Order for the main body.</i> (Distance to be preserved from the advance guard, or time and place of starting.) (c) <i>Order for the flank guard.</i> (Similar to advance guard order, but with special mention, as a rule, of reconnaissance duty. Sometimes the point at which the flank guard is to be detached is stated.) (d) <i>Order for the outposts.</i> (Instructions as to how they are to join the column.) 4. <i>Order for the baggage.</i> (Party detailed to conduct it, distance from main body, or special arrangements.) 5. Position of the Commanding Officer—at the beginning of the march, and sometimes subsequent positions.
2. Main body (in order of march). Cavalry. Infantry. Artillery. Infantry. Engineers. Hospital Corps.			
3. <i>Right (left) Flank Guard.</i> (C. O.) Troops named as in Advance Guard.			
Method of furnishing copies to troops.			Signature:

The preliminary and record problem were similar, but sufficiently distinct as to require new assumptions and other terrain.

The following is an example of one of the preliminary problems on the West Point map.

PROBLEM 5. ORGANIZATION AND TACTICS.

General Idea.

The Blue army is concentrating north of the Ohio River, with a view to operating south of that river. The cavalry screen has crossed to the southern side of that river, and is holding the bridges over it, pending the concentration of the army.

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During the second term more time relatively was assigned to the Department of Tactics.

Organization and Tactics.—This course comprised lectures, recitations, section room and map problems and practical work.

The attempt was made to bring the problems and the recitations together, so that application went hand in hand with theory. To do this the course was thoroughly mapped out, and a schedule of recitations, lectures and problems for the entire term was prepared. There were twelve problems in all relating to the subjects in the book. The problems were in pairs and embraced the following: Organization; infantry in attack and defense; cavalry in attack and defense; artillery in attack and defense. The arms combined in attack and defense and convoys. In each series two problems were solved, the first a preliminary one which was given out as soon as the subject was finished in the text book. The solutions to this problem were carefully scrutinized, and then a discussion followed pointing out the errors and discrepancies. As soon as practicable after this discussion the second problem followed, the solutions to which were marked and used in grading the students in their standing. For these problems the West Point, Kentucky, maneuver map was usually used.

Great attention was paid to the writing of orders, and models of various kinds of orders were furnished, of which the following is a specimen for a march in advance of a force composed of all arms.

FIELD ORDER No.	TROOPS.	NOTE.
1. Advance Guard (C. O.)	Cavalry Infantry. Artillery. Engineers. Hospital Corps (rarely)	Order for the advance guard to the enemy, and for the main body.
2. Main body in order of march.	Cavalry Infantry. Artillery. Engineers Hospital Corps	Order for the main body. (Distance to be preserved from the advance guard, time and place of starting.)
3. Flank guard.	Cavalry Infantry Artillery Engineers Hospital Corps	Order for the flank guard. Same as for advance guard order, but with special mention, as a rule, of distance to be preserved. Sometimes the distance to be preserved is stated.
4. Outposts.	Cavalry Infantry Artillery Engineers Hospital Corps	Order for the outposts. (Instructions as to how they are to join the main body.)
5. Baggage.	Cavalry Infantry Artillery Engineers Hospital Corps	Order for the baggage. (Party to be selected to protect it, distance from main body, or special arrangements.)
6. Position of the Commanding General at the beginning of the march, and sometimes subsequent positions.		Signature.

The two orders and their problems were similar, but sufficient to show a return to new assumptions and other details.

The following is an example of one of the preliminary problems on the West Point map.

PROBLEM 3. ORGANIZATION AND TACTICS.

General Idea.

The Blue army is concentrating north of the Ohio River, with a view to operating south of that river. The cavalry screen has crossed to the southern side of that river, and is holding the bridges over it, pending the concentration of the army.

to the equipment of the post will afford better opportunity for instruction in riding.

The written examination in hippology completed the first term, after which a vacation was granted to all student officers until January 4, 1904.

During the second term more time relatively was assigned to the Department of Tactics.

Organization and Tactics.—This course comprised lectures, recitations, section room and map problems and practical work.

The attempt was made to bring the problems and the recitations together, so that application went hand in hand with theory. To do this the course was thoroughly mapped out, and a schedule of recitations, lectures and problems for the entire term was prepared. There were twelve problems in all relating to the subjects in the book. The problems were in pairs and embraced the following: Organization; infantry in attack and defense; cavalry in attack and defense; artillery in attack and defense. The arms combined in attack and defense and convoys. In each series two problems were solved, the first a preliminary one which was given out as soon as the subject was finished in the text book. The solutions to this problem were carefully scrutinized, and then a discussion followed pointing out the errors and discrepancies. As soon as practicable after this discussion the record problem followed, the solutions to which were marked and used in grading the students in their standing. For these problems the West Point, Kentucky, maneuver map was usually used.

Great attention was paid to the writing of orders, and models of various kinds of orders were furnished, of which the following is a specimen for a march in advance of a force composed of all arms.

FIELD ORDERS, } NO. } TROOPS.	PLACE	DATE.	HOUR.
1. <i>Advance Guard</i> (C. O.)			
Cavalry.			1. Information as to the enemy, and <i>our other forces</i> .
Infantry.			2. <i>Intentions of the Commanding Officer.</i> (In the most general terms.)
Artillery.			3. (a) <i>Order for the advance guard.</i> (Time of starting; place whence it will start; road by which it will march; reconnaissance to be made; communication to be maintained with parallel columns, etc.; special duties.)
Engineers.			(b) <i>Order for the main body.</i> (Distance to be preserved from the advance guard, or time and place of starting.)
Hospital Corps (rarely).			(c) <i>Order for the flank guard.</i> (Similar to advance guard order, but with special mention, as a rule, of reconnaissance duty. Sometimes the point at which the flank guard is to be detached is stated.)
2. Main body (in order of march).			(d) <i>Order for the outposts.</i> (Instructions as to how they are to join the column.)
Cavalry.			4. <i>Order for the baggage.</i> (Party detailed to conduct it, distance from main body, or special arrangements.)
Infantry.			5. Position of the Commanding Officer—at the beginning of the march, and sometimes subsequent positions.
Artillery.			
Infantry.			
Engineers.			
Hospital Corps.			
3. <i>Right (left) Flank Guard.</i> (C. O.)			
Troops named as in Advance Guard.			
Method of furnishing copies to troops.			Signature:

The preliminary and record problem were similar, but sufficiently distinct as to require new assumptions and other terrain.

The following is an example of one of the preliminary problems on the West Point map.

PROBLEM 5. ORGANIZATION AND TACTICS.

General Idea.

The Blue army is concentrating north of the Ohio River, with a view to operating south of that river. The cavalry screen has crossed to the southern side of that river, and is holding the bridges over it, pending the concentration of the army.

to the equipment of the post will afford better opportunity for instruction in riding.

The written examination in hippology completed the term, after which a vacation was granted to all staff officers until January 4, 1904.

During the second term more time relatively was assigned to the Department of Tactics.

Organization and Tactics.—This course comprised lectures, recitations, section room and map problems and practical work.

The attempt was made to bring the problems and recitations together, so that application went hand in hand with theory. To do this the course was thoroughly mapped out, and a schedule of recitations, lectures and problems for the entire term was prepared. There were twelve problems in all relating to the subjects in the book. The problems were in pairs and embraced the following: Organization of infantry in attack and defense; cavalry in attack and defense; artillery in attack and defense. The arms combined in attack and defense and convoys. In each series two problems were solved, the first a preliminary one which was given as soon as the subject was finished in the text book. The solutions to this problem were carefully scrutinized, and then a discussion followed pointing out the errors and discrepancies. As soon as practicable after this discussion a record problem followed, the solutions to which were mapped and used in grading the students in their standing. In these problems the West Point, Kentucky, maneuver map was usually used.

Great attention was paid to the writing of orders, and models of various kinds of orders were furnished, of which the following is a specimen for a march in advance of a force composed of all arms.

FIELD ORDERS, } No. } TROOPS.	PLACE	DATE.	HOUR.
1. <i>Advance Guard</i> (C. O.)			1. Information as to the enemy, and <i>our other forces</i> .
Cavalry.			2. <i>Intentions of the Commanding Officer.</i> (In the most general terms.)
Infantry.			3. (a) <i>Order for the advance guard.</i> (Time of starting; place whence it will start; road by which it will march; reconnaissance to be made; communication to be maintained with parallel columns, etc.; special duties.)
Artillery.			(b) <i>Order for the main body.</i> (Distance to be preserved from the advance guard, or time and place of starting.)
Engineers.			(c) <i>Order for the flank guard.</i> (Similar to advance guard order, but with special mention, as a rule, of reconnaissance duty. Sometimes the point at which the flank guard is to be detached is stated.)
Hospital Corps (rarely).			(d) <i>Order for the outposts.</i> (Instructions as to how they are to join the column.)
2. Main body (in order of march).			4. <i>Order for the baggage.</i> (Party detailed to conduct it, distance from main body, or special arrangements.)
Cavalry.			5. Position of the Commanding Officer—at the beginning of the march, and sometimes subsequent positions.
Infantry.			Signature:
Artillery.			
Engineers.			
Hospital Corps.			
3. <i>Right (left) Flank Guard.</i> (C. O.)			
Troops named as in Advance Guard.			
Method of furnishing copies to troops.			

The preliminary and record problem were similar, but sufficiently distinct as to require new assumptions and other terrain.

The following is an example of one of the preliminary problems on the West Point map.

PROBLEM 5. ORGANIZATION AND TACTICS.

General Idea.

The Blue army is concentrating north of the Ohio River, with a view to operating south of that river. The cavalry screen has crossed to the southern side of that river, and is holding the bridges over it, pending the concentration of the army.

The Brown army is concentrating somewhere south of the Ohio, but its exact position is not known.

Otter Creek is not fordable at any point on account of recent heavy rains and the "spring rise" of the Ohio River.

Special Idea (Blue).

The First Brigade, First Cavalry Division, is camped at West Point. You command the First Squadron, Eighth Cavalry, in this brigade. At 5:00 P. M. April 3, 1904, you receive the following order:

FIELD ORDERS, }
No. 28. }

FIRST CAVALRY,
WEST POINT, KY., April 3, 1904, 4:00 P. M.

Troops.

1. First Squadron,
Maj. J. T. L.
2. Second Squadron,
Maj. T. P. H.
3. Third Squadron,
Maj. P. H. F.
(less Troop M.)

1. It is reported that a force of hostile cavalry, probably the enemy's cavalry screen, is advancing from the southwest. Small, mounted patrols were seen to-day thirty miles southwest of West Point.

2. This regiment will reconnoiter toward the southwest to-morrow, and will occupy the line of Otter Creek.

3. (a) The first squadron will march at 6:00 A. M., by the L. & N. Pike and Muldraugh-Garnettsville Road. The squadron commander will have important side roads north of his main road, and between Cross Roads No. 55 and Otter Creek reconnoitered, and will keep up communication with the second squadron. He will have the two wooden bridges at Griffith and Fitch and the wooden railway bridge at Christ destroyed. He will have the main road reconnoitered about ten miles beyond Garnettsville, and will take up a position to hold the two (2) bridges at Garnettsville.

(b) The second squadron will march at 6:10 A. M. by the L. & N. Pike and Tiptop-Grahampton Road.

4. (a) Two days' rations and one day's grain will be carried in saddle-pockets.

(b) The ammunition wagons and supply train with five days' rations and six days' grain will move at 8:00 A. M. to Grimes' farm (Cross Roads No. 49), under escort of Troop M.

5. Messengers will find the regimental commander at Grimes' farm (Cross Roads No. 49).

By order of

COL. W. G. D.,
C. S. B.,
Adjutant.

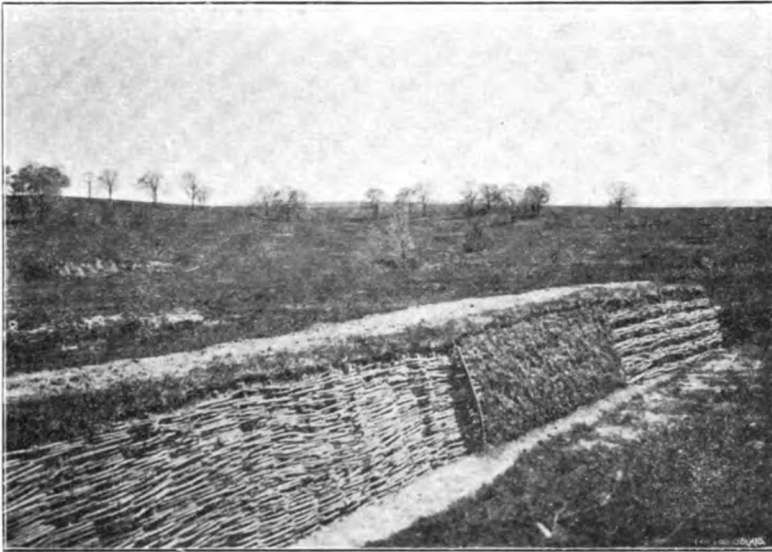
(Dictated to squadron commanders.)

Note: In the reconnaissance no sign of the enemy is found east of Otter Creek. At about eight miles beyond Garnettsville your patrol meets a stronger hostile cavalry patrol, and is driven back to Garnettsville, losing two men

killed, the hostile patrol pursuing it to within a mile of Garnettsville.

Required:

1. Statement of your plan of action.
2. Measures you take to hold the bridge.
3. Orders issued and reports sent back to the regimental commander.



CONTINUOUS HURDLE, SOD AND FASCINE REVETMENT.

4. A tracing with diagram of your dispositions for defense of the bridges at Garnettsville (omit position of the outposts).

In these problems it was the aim of the department to keep the instruction within the scope of the student's probable duties. The maneuvering of army corps or divisions or even brigades was not attempted. Where larger forces were employed only the adjutant's duty was required of the student officer in the solution. It was presumed that any of these students might be called upon to put the orders of a superior officer into shape, and the instruction was directed principally with this in view.

Usually half a day was devoted to the solution of these problems, and a time limit set. In actual field operations there is a time limit, and a close one, and it is best to introduce all conditions possible provided the simulations are not strained and unnatural.

The map problems afford an excellent means of transition from the text to practical work. As in security and information the only improvement that suggests itself, is the giving more time to criticism of each individual's solution. The transition from the theory of the text book to actual field conditions is still further simplified by the introduction of the war game and terrain rides.

It was impracticable to devote more than two half days for each student officer to the war game, but if we remember that the object of the course is to point out the way for further self-instruction and for instruction of others, it will be seen that this time was probably sufficient. The idea was to conduct the war game with all its refinements, so that the student officers would be thoroughly acquainted with the entire procedure. In this way it will be possible for them to select that part of the complete game which is best suited for the purpose they have in hand.

After the war game the terrain rides were taken up and careful attention given to this branch. Leaving out maneuvers, this affords the quickest and best means of imparting practical instruction. Terrain rides can be instituted anywhere and without special preparation. They are extremely interesting. The two important elements of time and distance are actual, or can be made so. Outside of the actual contact of troops very little else is missing. This instruction is suitable for any kind of class from privates to general officers, the only requirement being that there must be a good instructor. The following problem is an example of those solved during the course:

PROBLEM NO. 17. SHEET NO. 1.

TERRAIN RIDE. CAVALRY SCREEN.

A Brown army with its right flank on the Missouri River, is operating from Kansas City towards a Blue army at Atchison. The object of the Brown army is to engage the Blues wherever found. The right of the advance of the Browns consists of the First Division, First Army Corps, and it has



BUILDING PALISADE.

specific orders to hold the right of the Brown line, to guard against a hostile advance along the right bank of the Missouri River. If the enemy is encountered in superior numbers, the division is to seize an advantageous position and hold it until the arrival of reinforcements.

This First Division went into camp at 2:30 P. M. yesterday at Lansing (three miles south of Soldiers' Home), with the intention of continuing its march via Leavenworth and the Atchison Pike the next day.

At 3 P. M. the First U. S. Cavalry reports at Lansing for duty with the division. The division commander having received information that the enemy may be encountered

between Leavenworth and Atchison, decides to use the entire First Cavalry as a screening force for the next day's march and issues orders to that effect.

Required.—1. Those paragraphs of the order of the division commander, which relate to the First Cavalry.

Required.—2. (Supposing that the order of the division commander was received at 5 P. M.) the orders of the commanding officer, First Cavalry, for to-day's march.

Time allowed for solution ——— minutes.

SHEET NO. 2.

The First Cavalry covering the front of the First Division has carried out the orders of the regimental commander and the march has progressed so that the reserve of the cavalry screen is at this point (corner of Metropolitan and Grant Avenues).

Required.—1. A brief statement showing the distribution of the regiment on this screening duty, the position of all parts of the screen.

2. Where is the head of the advance guard of the division?

3. What dispositions are made for the conveyance of intelligence between parts of the screen and to the division commander?

Time allowed for solution ——— minutes.

SHEET NO. 3.

The commander of the cavalry has ridden forward to this point (Atchison Pike near reservation line). The right support consisting of two troops (A and B) is at 3; the left support consisting of two troops (E and F) is at 8.

Required.—1. Give the position and formation of the contact troops and their patrols.

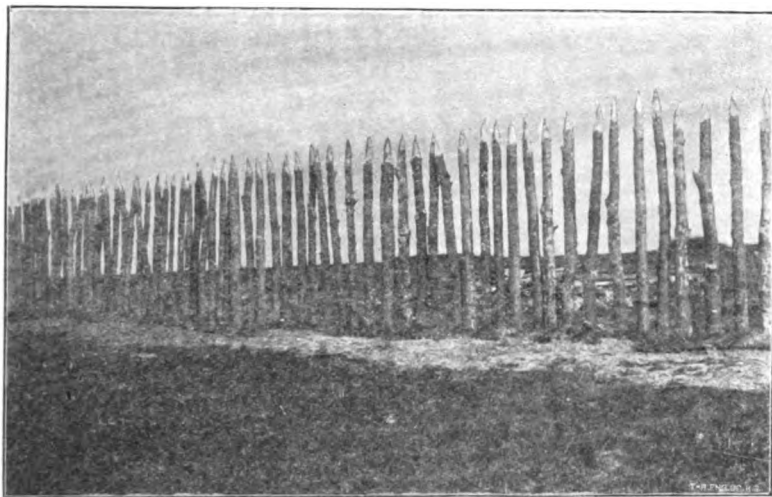
The cavalry screen commander receives messages from both the right and left support commanders, stating that what appear to be small hostile cavalry patrols have been observed advancing in our direction on all the roads, but that they are too far distant to admit of any more definite information.

Required.—What should the cavalry screen commander do?

Time allowed for solution ——— minutes.

SHEET NO. 4.

The cavalry screen commander has ridden forward to this point (F, on the Atchison Pike) and finds here one of the contact troops, G, of the left wing of the screen.



PALISADE.

From the information gathered from this troop, and from other sources, he learns that the Blues are advancing from the northwest, in numbers greatly superior to the Brown division, with the intention of forcing the right flank of the Brown army.

Required.— 1. Outline the general plan of the commander of the cavalry screen.

2. The message sent by him to the division commander.

3. The orders issued by the cavalry screen commander.

Time allowed for solution ——— minutes.

After the conclusion of the theoretical course the entire time of the department was taken up by practical work, according to the following notice:

Practical work in the Department of Tactics will commence May 5th, and be continued to the end of the term, June 30th.

The monthly calendars, as published, show the allotment of time to the department, and sections will report at Sherman Hall on the date and hours specified therein. Details of sections or individuals to report at other places or at other hours will be posted on the Department of Tactics' bulletin board. The bulletin board must be inspected daily after 12 noon by each student officer, and each officer will be held responsible for a full knowledge of notices posted thereon.

Officers will be detailed as engineer or topographical officers in connection with field exercises, and when detailed for such duty will report to the instructor in engineering, equipped for either mounted or dismounted road-sketching, as provided for by the detail, and will be graded on the performance of the duty assigned them by the staff of the Engineer Department.

Knowledge required for the solution of the problems embraces everything taught in the department in the two courses of *Security and Information* and *Organisation and Tactics*, and also a knowledge of the drill regulations of the student's arm of the service.

COURSE IN PRACTICAL WORK.

The course comprises a series of exercises illustrating the principles of the above subjects in combination as far as they have been taught in the department, without repeating any of the practical map problems had previously.

There will be three problems relating to each subject selected for practical illustration: (1) a map problem; (2) a problem (terrain ride) on the terrain, without troops; and (3) a problem (field exercise) on the terrain, with troops. The foregoing will be supplemented by exercises in the war-game on the map, which are not to be marked.

The exercises will be taken up in the following order:

- Problem 13. Field exercise. Practice march and march of concentration, with troops on the terrain.
- Problem 14. Terrain ride. Location and defense of outposts (all arms).
- Problem 15. Terrain ride. Occupation of position (all arms).
- Problem 16. Terrain ride. Operation of advance and rear guard (all arms).
- Problem 17. Terrain ride. Conduct of cavalry screen.
- Problem 18. Map problem. Practice march (all arms).
- Problem 19. Map problem. Outposts of all arms.
- Problem 20. Map problem. Attack and defense of position (all arms).
- Problem 21. Map problem. Operation of advance and rear guard (all arms).
- Problem 22. Map problem. Conduct of cavalry screen.
- Problem 23. Field exercise with troops, illustrating the occupation and defense of an outpost position.
- Problem 24. Field exercise with troops, illustrating the operations of advance and rear guards.
- Problem 25. Field exercise with troops, illustrating the conduct of a cavalry screen.
- Problem 26. Field exercise with troops, illustrating attack and defense of a convoy.
- Problem 27. Field exercise with troops, illustrating the attack and defense of a position.

Further time allotted to the Department of Tactics will be taken up by exercises in the war-game on the map and emergency terrain rides.

If it rains, or in case of interference with the schedule from any cause, the details posted for the day will lapse, to be repeated at the first available opportunity.

As a signal that the field exercise for any day has been suspended, red signal flags will be displayed on the flag staff at the college building and from the post headquarters building.

In order that all student officers may have equal tasks in the exercises and thus place them on an equitable basis for marking, the same problems have to be repeated several times. On that account student officers will refrain from dis-

cussion of the problems, and are forbidden to either convey to or seek from other student officers information derived from observation or experience in previous executions of problems, until the publication of the marks.

Marks will be assigned on these exercises, each one being divided into elements, weighted according to their relative importance and the time required for solution.

In the terrain rides, "personal equipment" will be one of the elements.

In each exercise with troops, the following elements only will as a general rule be graded, namely: "Promptness at rendezvous," "personal equipment," "formation of troops," "inspection of troops," "manner of giving instructions and directions," "conduct of marches," "manner of exercising command," "accuracy in estimating time required in execution of all essential features of problems or exercise," and "compliance with Field Exercise Rules."

As it is impossible to umpire and grade all the elements of field exercise in accordance with any fixed definite standard, and as it is also impracticable to assign the same function in each and every exercise to each student officer, or even to assign functions to each student officer of similar and equal importance in all the exercises, also because it is impracticable for one umpire to grade the work of each student officer, or for umpires to eliminate their own individual equation, no effort will be made, as a rule, to grade the tactical dispositions and performances of student officers in field exercises, other than to the limited extent described above. But umpires will be required to report whenever student officers permit or commit plain violations of *well known* and *important* tactical principles, and the officer responsible for such violations will be cut in grade by the instructor of the department in proportion to the importance of the principles violated.

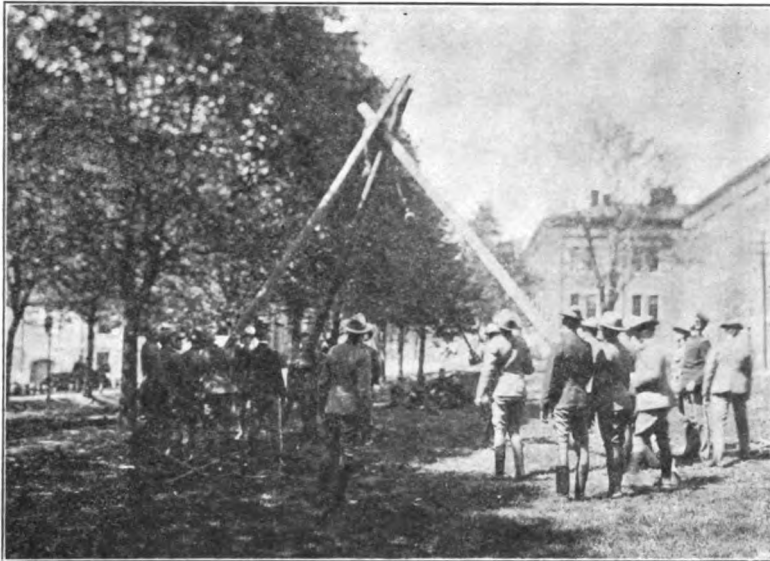
Student officers detailed for practical work should report properly equipped, and provided with legal-cap paper, a supply of which may be had on application to the Secretary. Solution, reports, etc., must be on legal-cap paper, unless otherwise directed.

Besides the terrain ride it will suffice to give one example of the problems with troops and the following of the practice march and march of concentration is here added.

PROBLEM NO. 13. SHEET 1.

PRACTICE MARCH WITH TROOPS. INSTRUCTION FOR BATTALION COMMANDERS.

Six student officers (names furnished you herewith) ten sergeants, twelve corporals, and eighty-four privates, are ordered to report to you at the southeast corner of the West End Parade at — A. M.



GIN.

Assume command of this force and form it into a battalion of three equal companies, each of two platoons.

After forming the battalion, march it via the cavalry drill ground and the Atchison Pike to the Frenchman's (E).

At this point the platoons separate and each marches under command of an officer over its designated route to the rendezvous at the southwest corner of the old prison. The exact time when all the platoons are to concentrate at the rendezvous will be announced to the platoon commanders by you, and so fixed that the one having the longest march will

have thirty minutes rest at the initial point (the Frenchman's).

After the concentration at the prison a rest of ten minutes will be given ; then form the battalion, march it to Pope Avenue in front of the infantry barracks and dismiss it.

The march will be made in accordance with Pars. 657 and 658 Infantry Drill Regulations, modified as the circumstances may require, each march to be considered as from an original start.

SHEET 2.

ROUTES FOR INFANTRY MARCHES AND INSTRUCTIONS FOR PLATOON COMMANDERS.

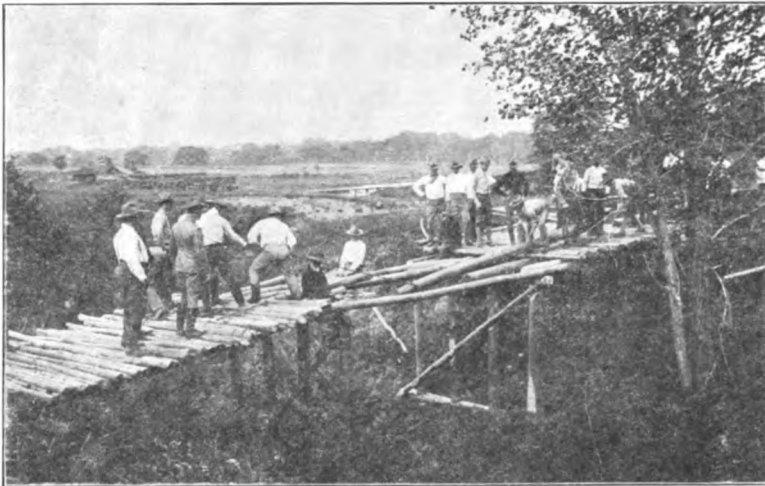
- | | |
|--------------|--|
| 1st Platoon | From E (Frenchman's) to 5 (Taylor's) and |
| 1st Company. | then along Millwood Road via Penn Lake to southwest corner of old prison. |
| 2d Platoon | From E (Frenchman's) by shortest road to |
| 1st Company. | Sheridan's Drive, above railway cuts ; along Sheridan's Drive via Hancock Hill and Penn Lake to southwest corner of old prison. |
| 1st Platoon | From E (Frenchman's) by shortest line to |
| 2d Company. | Sheridan's Drive, above railway cuts ; along Sheridan's Drive to the Quarry near the Loop, then via McPherson and McClellan Avenues to southwest corner of old prison. |
| 2d Platoon | From E (Frenchman's) along Atchison Pike |
| 2d Company. | to Atchison Cross (C) then to B and via Hancock Avenue, Pope Avenue, and McClellan Avenue to the southwest corner of the old prison. |
| 1st Platoon | From E (Frenchman's) along Atchison Pike |
| 3d Company. | to Atchison Cross to New Penitentiary, thence north to National Cemetery and via Pope and McClellan Avenues to southwest corner of old prison. |
| 2d Platoon | From E (Frenchman's) along Atchison Pike |
| 3d Company. | to Atchison Cross, then via the New Penitentiary to Grant Avenue and along Grant Avenue via Grant Monument and Pope Hall to southwest corner of old prison. |

The marches will be conducted in accordance with Pars. 657 and 658, Infantry Drill Regulations, modified as the circumstances may require and considered as from an original start.

SHEET 3.

INSTRUCTION FOR TROOP COMMANDER.

Three student officers (names attached hereto), four sergeants, six corporals, and forty-two privates are ordered to report to you at the northeast corner of the West End Parade at — A. M.



TRESTLE BRIDGE WITH ROUND TIMBERS.

Assume command of this force and form it into a troop of three equal platoons.

After the formation march the troop via the cavalry drill ground and the Atchison Pike to Kennedy's G. At this point the platoons will separate and each march under its officer over the designated route to the rendezvous at the Frenchman's E. The exact time when all the platoons are to concentrate at the rendezvous is to be announced by you and so fixed that the one having the longest march will have thirty minutes rest at the initial point (Kennedy's).

After the concentration at the Frenchman's, a rest of fif-

teen minutes will be given, then form the troop and march it by the most direct route to the cavalry stables and dismiss it.

The march will be made in accordance with paragraphs 981 and 982, Cavalry Drill Regulations, modified as circumstances may require. Each march, except the final march in, to be considered as from an original start.

SHEET 4.

ROUTES FOR CAVALRY MARCHES AND INSTRUCTIONS FOR PLATOON COMMANDERS.

- 1st Platoon.—From Kennedy's (G) west to McGaw's (22), south to Heintzleman's (28), east to Salt Creek (14), north to Atchison Pike (F) and to the Frenchman's (E).
- 2d Platoon.—From Kennedy's (G) northwest and west to Lowemont (K), south to 24, east 20 and 18, east to 16, north to F, and along Atchison Pike to Frenchman's (E).
- 3d Platoon.—From Kennedy's (G) north to Hoberg's (25), west to 39 and north to 37, east to Spencer's (13), and through Kickapoo to the Frenchman's.

The marches will be executed in accordance with Paragraphs 981 and 982, Cavalry Drill Regulations, modified as circumstances may require, each march to be considered as from an original start.

PROBLEM NO. 13. SHEET 5.

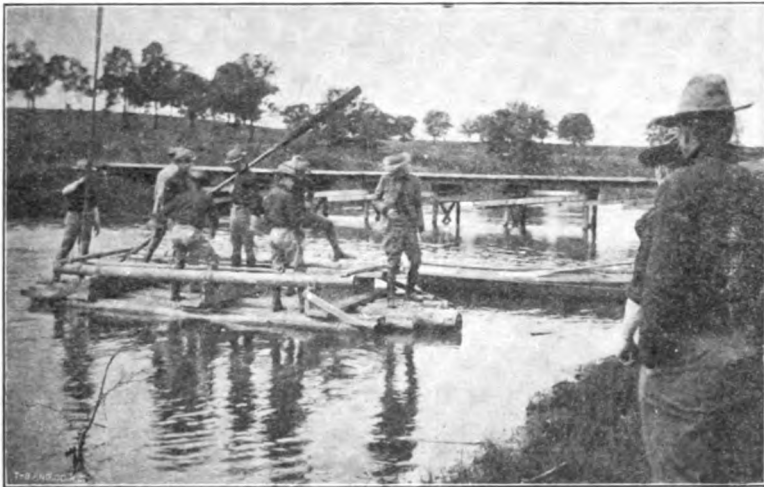
PRACTICE MARCH WITH TROOPS. INSTRUCTIONS FOR THE OBSERVERS.

You are attached to this force as an observer, and expected to render a full report in writing covering your observations.

Accompany the column on its march and upon arrival at the initial point, accompany the —— platoon —— company to the rendezvous, and then the combined columns to the place of dismissal. Then proceed to Sherman Hall and upon completion of your report hand it to the umpire.

This report should embody in chronological order all of your observations, including the assembly to the dismissal of the troops, of the execution of the problem by all officers on the following points :

Assembly, formation, time of departure from place of assembly, the initial point, the concentration point; time of arrival at the two latter points, and at the place of dismissal, the time and duration of halts, the rate of march, and errors and irregularities in any of the above with a statement of the correct solution.



LOG RAFT FOR FLOATING BRIDGE.

INSTRUCTIONS FOR TOPOGRAPHICAL OFFICERS. INFANTRY.

You are attached to this force as topographical officer and are required to make a road sketch of the route of the _____ Platoon, _____ Company, Sheet 2, beginning at the old prison and moving in the reverse direction to that prescribed.

The road sketch and report will be made in accordance with instructions for similar work in the Department of Engineering, using any of the methods therein described. Whichever method is used, the sketch and report must be finished in the field.

You are expected to regulate your time of starting and rate of progress so as to arrive at the initial point (the Frenchman's) with finished report and sketch at about the same time as your battalion, and be prepared to guide a platoon back over the route to the rendezvous (old prison) to furnish all necessary information concerning the character of the road, distances, probable rate of marching, defiles, possible ambuscades, etc. The sketches and reports will be turned in to the umpire at the rendezvous.

The combined sketches of the several topographical officers should produce a fair map of the region covered. When this problem has been completed by the entire class the combined sketch of each group will be posted for inspection and comparison.

INSTRUCTIONS FOR TOPOGRAPHICAL OFFICERS. CAVALRY.

You are attached to this force as topographical officer, and are required to make a road sketch of Route No. — Sheet 8.

The road sketch and report will be made in accordance with instructions for similar work in the Department of Engineering, using any of the methods therein described. Whichever method is used, the sketch and report must be finished in the field.

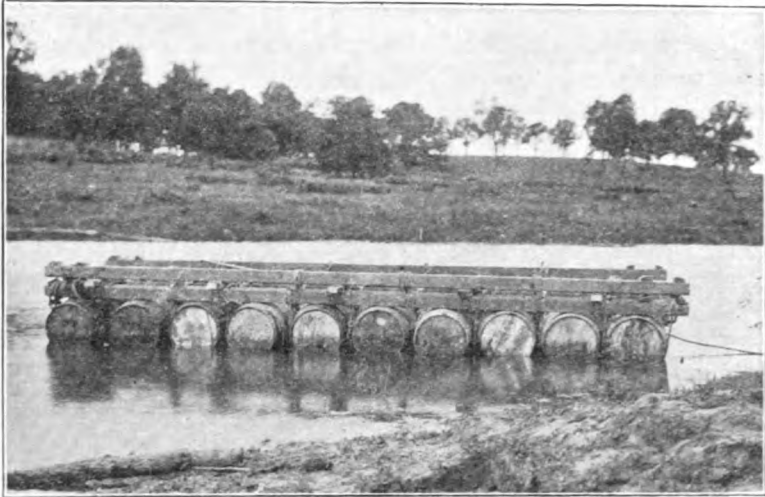
The time of starting and the rate of progress should be so regulated as to permit the finished sketch and report to be turned in to the umpire at the rendezvous at the time of the arrival of the several platoons at that point (the Frenchman's).

The combined sketches of the several topographical officers should produce a fair map of the region covered. When this problem has been completed by the entire class the combined sketch of each group will be posted for inspection and comparison.

ROUTES FOR ROAD SKETCHES FOR TOPOGRAPHICAL OFFICERS.
CAVALRY.

No. 1. From the Frenchman's (E) north to Kickapoo (13) and west to Neils (33).

No. 2. From the Frenchman's (E) west to Kennedy's (G), north to Hoberg's (25), west through (29) to Lowemont (K).



THE BARREL RAFT.

No. 3. From Kennedy's (G), west through (1) to Lowemont (K), south to (24), east through (18) to (16), north to Atchison road at (F).

No. 4. From (18) west to (26), south to Heintzleman's (28), east to Zimmerman's (14), north to Atchison road at (F).

Note: If possible, rate your horses over the measured mile before starting out.

In these exercises a certain number of student officers were assigned as observers. These were attached to the various organizations that had independent work of some kind, and were required to submit a report on the execution of the exercise. These details served two purposes. It gave the students practice in making reports and prepared them for the duties of an umpire. It also gave employment

to a greater number of student officers, which was an important gain when we consider the size of the class and the scarcity of umpires. Each observer was provided with the same data and information given to the officer to whose command he was attached, and the observer had to make the same solution, write the same orders and messages. Instead of sending them he handed them in with his report. He was also required to point out any errors that he observed and tell what he himself would have done. In this manner his was an independent solution, and the exercise was quite as valuable to him as to the officer actually in command. Whenever possible topographical officers were sent with columns and patrols, and these officers were under direction of the Department of Engineering. By this method it was attempted to bring the two Departments of Engineering and Tactics into touch with each other, and to combine the practical work of both in each tactical problem.

The results of the thesis in Security and Information led the department to try the same method in the tactics course. The thesis was to be a final rounding out of the entire course, and the subject selected was one suited to their purpose. At all posts a series of practical exercises in which all troops are to participate is required. Since many of the student class will have to act as staff officers at these posts, it was deemed best to give them some practice in getting up such problems. The following therefore was required:

THESIS.

Organization and Tactics.

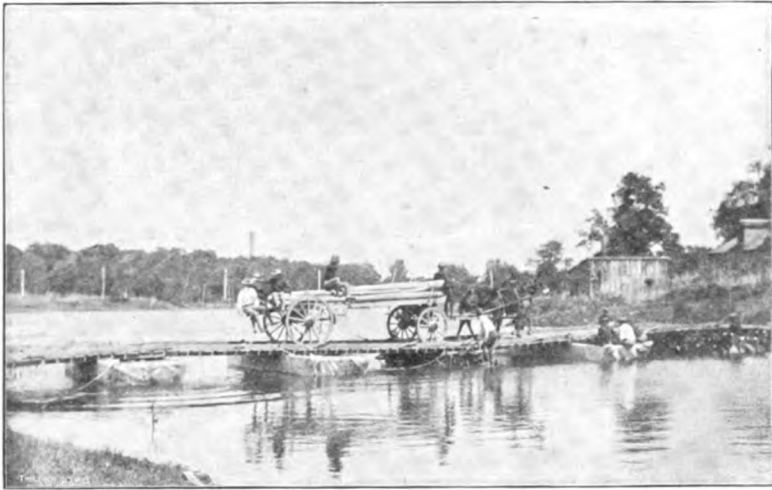
In accordance with Paragraph 25, Regulations and Program of Instruction of the General Service and Staff College, published in G. O. No. 1, A. G. O. 1904, a thesis will be prepared by each student officer and handed in to the instructor Department of Tactics not later than noon, June 10, 1904.

Subject of Thesis.

A series of four practical problems suitable for the progressive tactical instruction of a mixed garrison of the United States army, prepared under the following headings:

1. Map Problem.
2. Terrain Ride.
3. March of Concentration.
4. Exercise on the Terrain with Troops (all arms).

Note: For the purposes of this thesis use the Fort Leavenworth maps and assume a garrison of one battalion of infantry, two troops of cavalry, one battery (light) of field artillery, detachment of hospital corps, and the necessary transportation.



FLOATING BRIDGE, WITH PONTON, BARREL AND LOG RAFT.

In this issue of the *CAVALRY JOURNAL* three of the theses prepared under this order are published. The first by Captain R. T. Walton, the second by Lieutenant F. E. Buchan, and the third by Lieutenant R. S. Bamberger. To the department the results achieved were highly satisfactory.

The theoretical course in this department was not considered complete without an elementary course in strategy. Little time was left to devote to this branch, and on that account only a very simple schedule could be laid out. It embraced lectures, quizzes and a written examination.

The lectures were on the following subjects and campaigns:

You are expected to regulate your time of starting and rate of progress so as to arrive at the initial point (the Frenchman's) with finished report and sketch at about the same time as your battalion, and be prepared to guide a platoon back over the route to the rendezvous (old prison) to furnish all necessary information concerning the character of the road, distances, probable rate of marching, defiles, possible ambuscades, etc. The sketches and reports will be turned in to the umpire at the rendezvous.

The combined sketches of the several topographical officers should produce a fair map of the region covered. When this problem has been completed by the entire class the combined sketch of each group will be posted for inspection and comparison.

INSTRUCTIONS FOR TOPOGRAPHICAL OFFICERS. CAVALRY.

You are attached to this force as topographical officer, and are required to make a road sketch of Route No. — Sheet 8.

The road sketch and report will be made in accordance with instructions for similar work in the Department of Engineering, using any of the methods therein described. Whichever method is used, the sketch and report must be finished in the field.

The time of starting and the rate of progress should be so regulated as to permit the finished sketch and report to be turned in to the umpire at the rendezvous at the time of the arrival of the several platoons at that point (the Frenchman's).

The combined sketches of the several topographical officers should produce a fair map of the region covered. When this problem has been completed by the entire class the combined sketch of each group will be posted for inspection and comparison.

ROUTES FOR ROAD SKETCHES FOR TOPOGRAPHICAL OFFICERS.
CAVALRY.

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THE BARREL RAFT.

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Note: If possible, rate your horses over the measured mile before starting out.

In these exercises a certain number of student officers were assigned as observers. These were attached to the various organizations that had independent work of some kind, and were required to submit a report on the execution of the exercise. These details served two purposes. It gave the students practice in making reports and prepared them for the duties of an umpire. It also gave employment

1. General Principles of Strategy.
2. The Novara Campaign in Italy, 1849.
3. The Campaign of Ulm in Germany, 1805.
4. The Campaign of 1796 in Italy.
5. The Vicksburg Campaign in 1863.
6. The Campaign of Koenniggratz in 1866.
7. The Campaign of 1862 in Virginia.
8. The Atlanta Campaign in Georgia, 1863.
9. Massena's Retreat in Portugal, 1811.
10. The Campaign of Metz and Sedan in 1870.
11. The Campaign of Plevna in 1877.
12. The Passage of Rivers in the Theatre of War.

These lectures, the subjects of which were selected by Colonel A. L. Wagner, Adjutant General's Department, were intended to illustrate some of the principles of strategy. The course was an elementary one, and for lack of time had to be so. The method pursued in this elementary study was one that gave good results, and it is now the tendency to make the next year's course in other subjects taught at the College similar to the strategy course.

For the lectures, which were delivered by the instructors, the entire student class (ninety-one officers) were assembled in the lecture room. A printed pamphlet containing a synopsis of the campaign was issued to each student prior to the lecture. A reading of the pamphlet assured a certain familiarity with the campaign, and made the lecture more interesting. The lecture, which lasted about one hour, covered the entire campaign, laying especial stress on the principle or principles of strategy to be illustrated by it.

One of these pamphlets is reproduced in the *CAVALRY JOURNAL* of July 1904 and shows the general characteristics of them all.

After the lecture the different sections into which the student class is divided assembled for recitation on this campaign. Besides the printed pamphlet and the map, each student was given a set of questions on the campaign, answers to these being found in the pamphlet. During the recitations or quizzes these questions were propounded to the students and their answers corrected.

To illustrate these lists of questions the one on the Campaign of Plevna is here reproduced.

QUESTIONS ON THE CAMPAIGN OF PLEVNA, 1877-78.

1. What caused the war of which this campaign was a part?



REES' PILE BRIDGE. FIRST POSITION NEW BAY.

2. What approximately was the strength of the opposing armies?
3. Describe the theatre of operations (exclusive of the Balkans).
4. Describe the Balkans in the theatre of operations.
5. Whence did Russia and Turkey respectively receive their supplies?
6. What was the Russian plan of campaign and what

would have been a better plan if the Turks had not possessed certain advantages?

7. What prevented an early successful ending of the war for the Russians?

8. Into what three periods does Greene divide the campaign (omit dates but give periods in weeks).

9. Why was Plevna such an important factor in the campaign?

10. What position was taken up by the Russians after concentrating and in anticipation of crossing the Danube?

11. How was the Danube crossed by the Russians?

12. What was the Russian plan of operations immediately after crossing the Danube.

13. What was now accomplished by the Russian left wing?

14. Explain in general terms Gourko's maneuvers resulting in the capture of Shipka Pass.

15. Whence came the army of Osman Pasha in its advance on Plevna, and where was it first met by the Russians and with what result?

16. Describe the second attack by the Russians on Plevna (July 30th).

17. What brought the Russian advance to a standstill?

18. What were the positions of the opposing armies about this time?

19. What did the Russians do next?

20. What should the Turks have done at this time; and what did they actually do?

21. With what idea did the Russians attack Lovtcha (September 3d) and extend their lines towards the Esker?

22. When did the investment of Plevna become effective and how was this accomplished?

23. What did Osman Pasha accomplish by holding Plevna, and what did this serve to illustrate?

At the end of the course a written examination was held to determine the relative proficiency of the students on this subject. Three questions were selected from each of the ten campaigns in the course. The standing of the class in this subject was very satisfactory and serves to illustrate the

average marks usually attained by the class. The marks range from seventy per cent. (one student) to ninety-eight per cent. (one student). Forty-two students made more than ninety per cent., and seventy students made more than eighty per cent. This is near the usual marks made throughout the course, and is a splendid showing for the second class of the General Service and Staff College.

Many changes, innovations and improvements will be made in the course for the next class at the school. Furthermore, a new and advanced class will commence their studies. The development of the school under its new start will be watched by all with great interest.

DEPARTMENT OF ENGINEERING.

By Captain E. T. COLE, Sixth Infantry.

Practical Work in Surveying.

Each officer did the instrumental work, calculations and plotting of the following surveys:

Traverse with transit, establishing elevations by vertical angles; measurements by stadia. Contoured map of area surveyed.

Traverse with surveyor's compass. Elevations by vertical angles; measurement by chaining. Contoured map of area surveyed.

Plane table survey. Frame work by intersections and boundaries by traversing; elevations with clinometer. Contoured map of area surveyed.

Profile survey with level. Plotting of profile.

Contour survey with level and plot thereof. Area divided into fifty foot squares by transit and ranging out lines.

Triangulation over extended area, including measurement of base line by most careful methods.

Outpost survey with sextant, using method of intersections in front of carefully measured base.

Military Topography.

(a) Determine length of pace.

(b) Construct working scales.

Road sketch on foot with note-book, compass, and clinometer.

Position sketch with drawing board, box compass, protractor and scale.

Road sketch on foot with sketching case.

Outpost sketch with improvised instruments.

Position sketch with drawing board, range finder, and clinometer.

Fill in details and contours on a section of an enlarged county map to make of it a military map.

Road sketch, mounted, with note book, compass and clinometer.

Road sketch, mounted, with sketching case.

Road sketch, mounted, with choice of instruments.

In all these problems the work to be done was definitely laid out except in the last where credit was given for the amount of work done in the allotted time.

Field Fortifications.

Construction of lying and kneeling trenches.

Construction of standing trench and palisade.

Tactical location of trenches and field works.

Construction of fascine and gabion.

Construction of wire entanglement, high and low.

Construction of abatis.

Construction of revetment of fascines and gabions.

Construction of revetments of sandbags and sod.

Construction of continuous hurdle revetment.

Construction of loopholes on parapet.

Trace and defilade a field work.

Construction of profile of a field work.

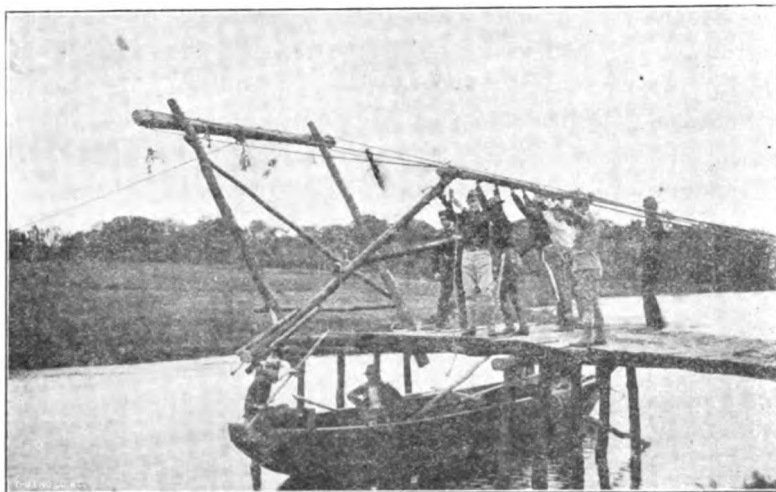
Field Engineering.

Making knots and splices. All of those set forth in manual.

Construction of shears and gin with tackles and slings for barrels and boxes. Construction of canvas ponton and barrel raft.

Bridge building on land and in water with Birago trestle and Rees frame trestle.

Trestle bridge of round timbers.



REES' PILE BRIDGE. PLACING DERRICK FRAME.

Bridge with floating supports, using canvas ponton, barrel raft and log raft.

Ponton bridge with engineer reserve train equipage.

Pile bridge after design of Captain Rees. This bridge can be built with equal facility over dry runs, water, sand or marsh, piles being driven without pile driver or false work by slinging the advance bay from a movable trestle derrick and using this as working platform from which to place and drive piles to support its out-stream end.

Suspension bridge with wire cables 100 feet in clear.

In all above problems all the work was done by student officers. In bridge work, using rough timbers, all cutting,

squaring, shaping, etc., and in general all framing and carpenter work was done by the class. No soldier labor was used in any problem except for delivering supplies to the place where they were to be used. All bridges were tested by crossing heavy loads over them.

As an illustration of how these problems are prepared for the class the full directions for the construction of the pile bridge above mentioned, are here given:

Bridge with pile trestles.

Six sections. Four half days.

The trestles consist each of five vertical piles and are spaced twelve feet six inches c. to c. In each trestle the piles are spaced three feet two inches c. to c. The caps are flattened on top and bottom to a thickness of about six inches and are drift bolted or pinned to top of piles. All trestles are braced by two diagonals spiked to piles. The balks are fourteen feet long and are laid five in each bay at intervals of two feet eight inches c. to c. The outer ones are drift bolted or pinned to the caps and the three inner ones are lashed to hold them in place.

The flooring is made either of three-inch by thirteen foot-poles or of two-inch plank. It is held in place by side rails of poles laid over the outer balks and lashed thereto near the trestle bents and at middle of each bay, or of two-inch by four-inch scantling spiked to the flooring planks. The abutment sills are caps sunk in the ground and firmly staked front and rear. If a shore trestle is needed between the abutment sill and the water, it will consist of a mud-sill, five posts, a cap and two diagonal braces.

Each bay of the bridge is constructed as follows: Build a frame consisting of a cap, the two outer balks, a ledger and a diagonal. Carry it forward and engage the ends of the balks under the previous cap to which they are temporarily lashed. Revolve the frame to its place by hauling out a forestay and then lowering by the backstays, using a derrick frame to take the weight. Lay a temporary flooring of four planks or chess. Set the piles from the outer end of the suspended frame, drive them, and saw them off. Shift the frame to place the cap on the piles and drift bolt or pin

through cap into tops of piles. Lay three more balks and lash them. Floor half the new bay. Brace the trestle with two diagonals spiked to poles. Proceed with next bay in same manner.

PARTIES	DUTIES.	No. of Men.	REMARKS.
1	Prepare caps	4	3 parties of 4 men each.
2	Tackle and holdfasts	12	
3	Abutment and siderails	4	
4	Prepare piles	4	2 parties of 5 men each.
5	Derrick, balk and frames	12	
6	Frame builders	10	
7	Piles and flooring	18	
8	Boat crew and braces	6	
	Total	70	

1. Cap section. Four men. Prepare trestle caps.

Tools: One cross-cut saw, one axe, one adze, one cant-hook, two scratch awls, one chalk line, two augers (one-half inch), one measuring rod (fifteen feet) marked on face at center and at intervals of three feet two inches from center, and on edge at center and at intervals of two feet eight inches, one rule (two feet), one level, one hammer, nails (eight-penny), one square.

Lay cap on skids and chock. Saw to length of fifteen feet. Across ends near top and bottom draw horizontal lines to determine required thickness six inches or tack on short six-inch boards. Snap the chalk line horizontally to determine top cutting lines. Flatten down to these lines with axe and adze. Roll the cap over and flatten other side in same manner. The cap will now be of uniform thickness and flat on top and bottom. On center line of top bore one-half-inch holes vertically at center and at intervals of three feet two inches from center. Mark with chalk, on top, cross lines at two feet eight inch intervals from center for balk.

2. Tackle section. Twelve men, three parties, four each. Four will rig and man upstream backstay, four rig and man downstream backstay, and four rig and man forestay across the stream. Each party rigs its own tackle and sets holdfasts. The backstay holdfasts are set eight feet on either side of axis of bridge and thirty feet back from the abutment sill; each holdfast is a four-inch by five-foot stake

driven three feet in ground and tied back to second stake. Rig a strap of three-fourths-inch rope to hook tackle into. Reave double tackle of three-fourths-inch rope 300 feet long in six-inch blocks, and hook to holdfast and backstay. Backstay is 200 feet of one-inch rope double or 100 feet of one and one-half-inch rope with large eye at end. When a frame is in place, put bight or eye of backstay over end of cap and stand by to take strain when frame is heaved over; then when derrick is set, lower away to place. Stand by to raise and lower as required. For the forestay a similar holdfast is set across the stream, in axis of bridge, fifty feet from water. Rig tackle of 300 feet of three-fourths inch rope in double and single six-inch blocks, and hook to strap (three-fourths-inch) on holdfast and to forestay, which is a one-inch line leading across stream to cap of frame. When frame is adjusted heave it over and stand by to haul it out in place when piles are bored. Each of these three parties will require one axe, one maul, one crowbar, and blocks and ropes as specified. The forestay party will lay the abutment sill on their side. (See abutment section.)

3. Abutment and side-rails. Four men.

Tools: One pick, two shovels, two mauls, one level, one square, lashing and racks sticks, range stakes.

Range out axis of bridge. Dig trench perpendicular to axis of bridge and extending eight feet each side thereof, eighteen inches wide, nine inches deep, bottom level. Lay abutment sill (a cap not bored) in trench; level and square. Stake with eight three-inch by four-foot stakes, four in front and four in rear of sill. Back-fill with earth and tamp hard.

When a bay of the bridge is completely floored lay and spike the side rails of two thicknesses of two-inch by four-inch scantling breaking joints, placing them over the outer lines of balks.

4. Preparing piles. Four men.

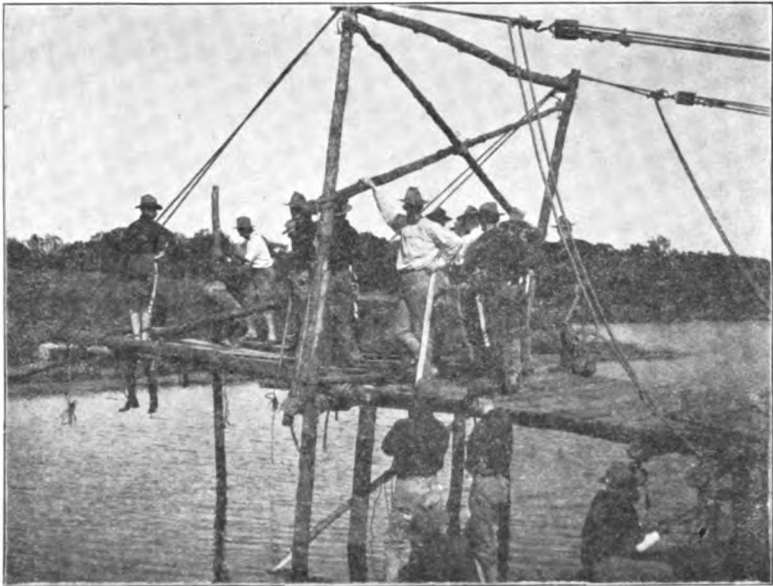
Tools: One cross-cut saw, two axes, one adze, one tape, one cant hook, one drawing knife. Sharpen the small ends of piles to a conical point one foot long. Get depth of water for next bent from boat crew, and cut five piles for that bent to a length equal to the depth of water plus ten feet. The

piles should be four or five inches in diameter at the small ends.

5. Derrick section. Twelve men.

Tools: Two hand saws, two sledges, spikes (six-inch), lashings, measuring rod or tape.

Build frame as follows: Two legs twelve feet six inches by four inches at top, laid parallel thirteen feet eight inches between centers Spike and lash (one-half-inch rope) a



REES' PILE BRIDGE. SETTING PILES.

transom three and one-half inches by fourteen feet eight inches across the legs six inches from top. Spike and lash (one-half-inch rope) diagonals three-inch by sixteen foot from points near transom to points six feet below transom; lash (one-half-inch rope) diagonals at crossing; square lashings. Attach one-half-inch lashings twelve feet long to transom near each leg.

The foot of each leg must be finished off with jaws to embrace the cap of a trestle and revolve on it. Flatten the front and rear sides of the legs for four feet to good bearing surfaces. For each leg bevel to a flat surface two pieces five

feet long and five inches in diameter, making the bevel four feet long. Spike these pieces to the flattened faces of the leg, letting them project twelve inches beyond it. Cut away the inside of these projecting ends so that their clear opening will be nine inches.

Get the first balk frame from the first party of frame builders, the second from the second party, third from first party, and so alternate. When a frame is called for, lay hold facing the stream as follows: Five men behind cap, two men in front of cap lifting balks, three men behind ledger and two men at front ends of balks. Lift together and carry frame to its place on the bridge, lower the front end and rest the ledger on the balk of the previous bay. A frame received from the first party of frame builders lies on the downstream side of the balk of the previous bay; one from the second party lies on the upstream side. Raise the rear end and slide forward to engage the balk under the cap of the previous bay. Fasten by upward and outward turns of lashing around cap. The middle cap-carrier will disengage the forestay and fasten it to the new cap six inches from center by a round turn and two half hitches. The outer cap-carriers will disengage the backstays and loop them over ends of new cap. Then as the forestay is tightened and the backstay slacked off, lift the frame and help heave it over.

Carry the derrick frame forward, legs in advance and set jaws of legs over trestle cap. Lift the transom end to the backstays and lash with the one-half-inch lashings. The derrick frame thus becomes a rocker arm for lowering the balk frame to place. Lay five planks from cap to cap as a temporary flooring of the new bay.

Two of the party remain to watch the derrick and the rest go ashore and prepare three balks by cutting them to a length of fourteen feet. If they are to lie in a frame built by the first party of frame builders, carry them tops foremost; if for a frame of the second party, carry butts foremost. When balks are called for, six men of the party (two to each balk) carry them out, lay them in place and lash the

rear ends to balks and cap of previous bay, making square lashings with one-half-inch rope twenty-eight feet long.

As soon as the flooring has been laid to the new bay, lower the derrick frame and lay it flat on the bridge. Then carry forward a new balk frame and repeat the operations described above.

6. Frame builders. Ten men, two parties of five men each.

Tools for each party: One measuring rod fifteen feet long marked on face at center and at six feet three inch intervals each side of center and on edge at center and at four feet three inch intervals each side of center, four augers (one-half-inch), four sledges (one-half-inch), drift bolts (twelve inches long), spikes (six inches), tape, one cant hook, two crow bars, one maul, two hand saws, one square.

The first party (words in parenthesis apply to second party) lay two six-inch by fifteen-foot skids on ground parallel with stream, and twelve feet apart, bring the ends even, block them up to a level and stake them fast. Mark points on each skid five feet four inches each way from center line and cut shallow notches about three inches wide. On these skids build the frames as follows: Lay two balk butts (tops) toward the river, in notches on skids; cut to a length of fifteen feet, but do not discard a balk three or four inches short; mark points on each balk six feet three inches from its center. Lay a cap, marked side down, over marks near tops (butts) of balks, shift the cap till its outer marks are even with the upstream (downstream) side of the balks; bore vertically and centrally through cap and balk at crossings one-half-inch holes, and drive twelve-inch drift bolts. Bore holes vertically through balk at the other six feet three inch marks. Spike on a ledger three inches by thirteen feet across the balks at a distance of four feet three inches from centers of balks toward the butts (tops). Spike on a diagonal three and one-half inch by fifteen feet from a point on the downstream (upstream) balk near ledger to a point on the upstream (downstream) balk near cap. The ends of ledger and diagonal should be slightly flattened and two spikes used in each end. Be sure that the distance between

the upstream (downstream) sides of the two balks is exactly ten feet eight inches. If greater than this, trim off the upstream (downstream) balk; if less, trim off the downstream (upstream) balk at the end for a distance of three feet.

Attach five lashings (three-fourths-inch rope) twenty-two feet long with eye splice in end to cap at points three inches upstream from drift bolt holes. Pass each around the cap, reave end through eye, haul taut in place, coil and stop. Attach two lashings of one-inch rope twenty-five feet long to the two balks just outside the drift bolt holes in the butts (tops) by throwing a clove hitch at the middle point of the lashing and slipping it over end of balk to proper place leaving two free ends. When a frame is finished lay it to one side without turning and build another.

7. Piles and flooring. Eighteen men.

This party is subdivided according to the work in hand as follows:

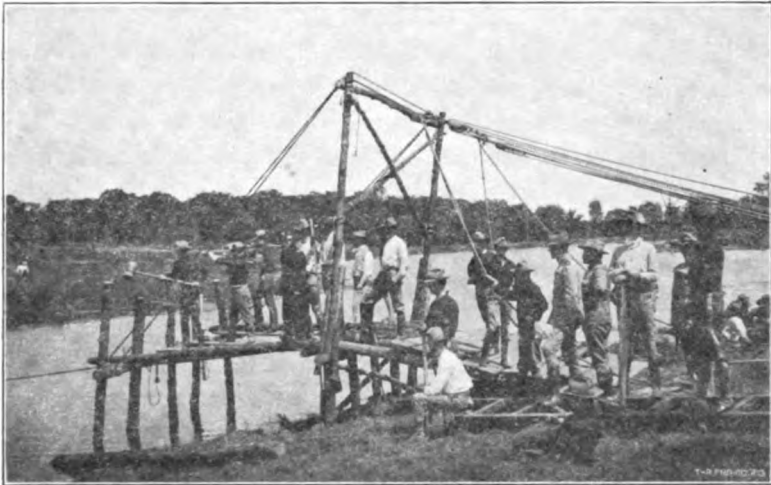
NO. OF MEN.	FOR PILE WORK.	FOR FLOORING.
8	Carriers	Carriers.
5	Mauls and augers	Two layers, three sawyers.
5	Saws and hammers	Spikers.

The piles are carried out two at a time, four men to a pile, except the last which is carried by four of the saw and hammer party. Each pair of carriers provides a carrying bar, three feet six inches long, with a short lashing of one-half-inch rope attached near the middle. Lay the bar across the top of the pile and pass the lashing under the pile and back to the bar where a few turns secures it.

When piles are called for carry forward two piles, the second and fourth, points foremost, and lay them across the cap over the second and fourth auger holes. Disengage the bars and launch the pile forward till it overbalances. The front carriers pass the lashing on the cap over the pile and down and out around the cap. The rear carriers let go, one front carrier holds the lashing and the other controls the pile to a vertical position. When plumb, slack the lashing suddenly and drop the pile to the bottom, then tighten the lashing and

draw the pile to its place against the cap. When adjusted lash both piles to the cap with square lashings.

While these two piles are being driven the carriers bring up the first and fifth piles and the saw and hammer party brings the middle pile. When the frame has been raised after driving the first two piles, these three are set in place and lashed in like manner as the first two, the saw and hammer party performing the duties of carriers for the middle pile. The carriers lend their weight on the frame to assist in sinking the piles.



KEES' PILE BRIDGE. DRIVING PILES.

When piles are set and lashed the backstays are slackened and the maul men drive the piles, two to each pile when practicable. If the piles drive hard, increase the weight on the frame and at intervals give it a swaying motion.

When the piles are driven the maul men retire and provide themselves with one-half-inch augers, and the saw section takes their place. The frame, if not already so, is adjusted to a convenient height and the piles are marked and sawed. The first and fifth sawyers are provided with measuring rods marked or cut to the height of piles above water as tested on the preceding bent. The third (middle) sawyer has a straight edge of one-inch board fourteen feet long.

The second and fourth sawyers have hammers and nails. The straight edge is tacked on against the outside of the piles at a height determined by the two measuring rods, the nails being only half driven so that they can be readily withdrawn. Each sawyer saws his pile off level, resting the saw on the straight edge. Knock off the straight edge, carry the sawed off ends ashore and get drifts, bolts and sledge hammers.

The auger section returns and each bores a one half-inch hole in the axis of his pile six inches deep. After laying aside their tools they remain to assist in setting the cap and engaging the drift bolts in the piles.

The hammer section, each with drift bolt one-half inch by twelve inches, and sledge hammer, drive drift bolts through holes in cap till the points project one inch. Then the frame lashings are cast off and the frame is raised and hauled forward by the forestay till the cap is over the piles. As it is lowered in place the auger men guide the points of the drift bolts into the holes in the piles and the bolts are then driven home.

The rear end of the balk frame is then adjusted in position, augers Nos. 1 and 3 bore the cap, and hammers Nos. 1 and 5 drive bolts through balk and cap.

The pile section then retires till the balks of the new bay are laid and lashed, when they lay the flooring to the middle of the new bay.

The carriers take from the pile each one plank in right hand at the balance, front end raised and rear end trailing, and advance in single file, keeping to the right, to the head of the bridge, where they swing the plank to the left and hand it in a horizontal position to the floor layers, then retire quickly, keeping to the right, and bring another plank.

The floor layers stand, one on the first and second balks and one on the fourth and fifth balks, take the planks from the carriers and lay them in place, spacing them about one-fourth inch. They will be assisted by two of the sawyers, who stand on the ends of the plank last laid and hold a piece of wood or a spike as a separator for each new plank. They

also see that the ends of the planks are kept even on the proper line.

If the planks are uneven in length the upstream ends are kept even, and after spiking the downstream ends are sawed even by the sawyers.

When the planks are laid the spikers drive spikes as follows: Nos. 1, 3 and 5 drive spikes into the corresponding balks through the near edge of each plank. Nos. 2 and 4 drive spikes into the corresponding balks through the far edge of each plank. They take care not to displace the planks while spiking them. Nos. 1 and 5 should keep in advance of the others, who wait till 1 and 5 have driven their spikes in a plank before starting their own.

8. Boat crew and braces. Six men.

Material: One ponton with oars, boat hooks, painters, and lashings; braces three and one-half to four inches by fifteen feet, two hand axes, one sledge, spikes (six inches), one sounding rod (fifteen feet) marked to feet, one hand saw.

As soon as the position of one bent is determined, take soundings for the next bent, twelve feet six inches from the last, and give the sounding to the section preparing piles.

As soon as a bent is completed, spike on two diagonals, one inside and one outside.

Trim the piles and flatten the braces to a good bearing, and use two spikes in outer piles and one at interior piles. Take care that the tops of the diagonals do not interfere with the jaws of the derrick frame. It is better not to brace a bent until the derrick has been removed from its cap.

The shore trestles, one on each bank, are erected by the pile and floor section. They are similar to the pile bents, but are constructed from the shore and not from a suspended frame.

If a pile bent when constructed is found to be out of plumb or out in line the boat crew will, before attaching the diagonals, heave it plumb or in line by means of lines leading obliquely to the nearest shore. It should be sprung so as to correct twice the error. Then when the diagonals are fastened it will settle back to its proper place.

All who are not actually engaged in work on the bridge will remain on shore and have their tools and material ready for the next duty. The several working parties should keep together and move as a body without straggling. One member of each working party will be designated as its chief. He sees that his party is supplied with the necessary tools and material for each duty and that it moves to and from its work promptly. When a united effort or a simultaneous movement is required he gives the word.

If the instructions are accurately followed the work will proceed rapidly and in an orderly manner. If any one party disregards instructions there will result confusion and delay for all, and possibly danger for some.

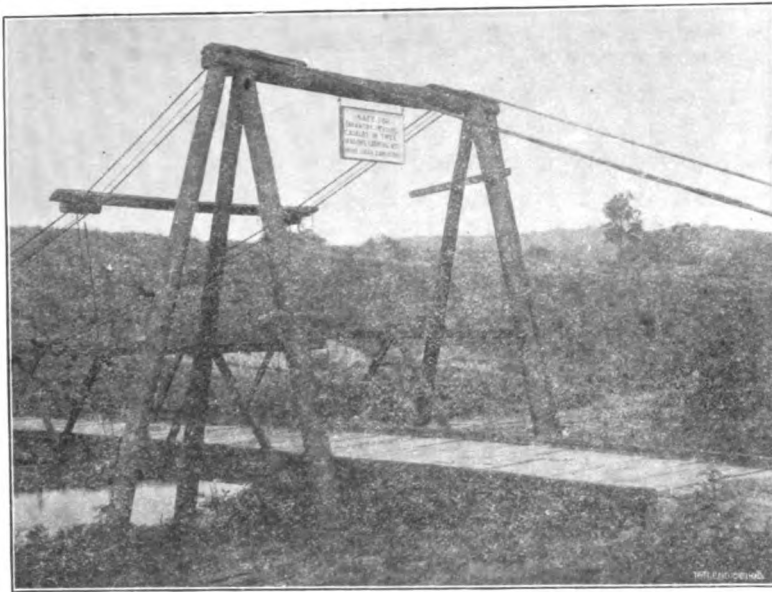
THE DEPARTMENT OF LAW AT THE INFANTRY AND
CAVALRY SCHOOL AND STAFF COLLEGE.

By Major D. H. BOUGHTON, Eleventh Cavalry, LL. B., Instructor.

It has been said that law is the pride of the human intellect and the collected wisdom of ages, combining the principles of original justice with the boundless varieties of human concerns.

The remark is often heard that we have too much law in the army. Generally no reason is given for this conclusion, but the presumption is that the proverbial "law's delay" is interfering in some way with the customary march of military affairs. Perhaps too much restriction is being thrown around the exercise of powers that from their nature are more or less unrestrained, more or less arbitrary, a not unnatural conclusion, for there are times when the military power must throw aside all the usual and customary restraints and be guided solely by the great law of "necessity." Ordinarily, however, any power, be it military or otherwise, is most effective when judicially controlled by legislative enactment or guided by precedent, the possibility of arbitrary or tyrannical action being removed as far as

possible. The very presence on our statute books of remedial measures is but the evidence of the previous existence of evils which said measures were intended to correct. So when we find in our army regulations that "Military authority will be exercised with firmness, kindness and justice," "Punishments must conform to law and follow offenses as promptly as circumstances will permit," and "Superiors are



SUSPENSION BRIDGE TOWER.

forbidden to injure those under their authority by tyrannical or capricious conduct, or by abusive language," we must conclude that a time has been when caprice and tyranny entered into the exercise of military power, and that the object of the prohibition is to guard against a possible recurrence of this condition. Otherwise the reason for its existence is wanting.

Broadly, the object of law is to protect rights and redress wrongs. The great mass of people of this country fear the military power. And not wholly without reason, for history is full of instances of its unjust excesses and usurpations. The military power from its very nature is liable to be arbi-

trary and prone to take matters into its own hands. Officers accustomed to command and to instant obedience are impatient of restraint or opposition and apt to disregard or override the rights of individuals. Especially is this true during emergencies when the military is called upon to aid in restoring order. In these cases a knowledge of the law and of the rights of individuals and of communities will often prevent those errors and excesses which go far towards rendering the army obnoxious to the people. Moreover the very study of law, while it makes known the reciprocal rights and duties of individuals, also inculcates a 'due regard for the rights of others and would be justified on this if on no other grounds. Every citizen, soldier or otherwise, and particularly those to whom powers are entrusted, should understand not only his duties to his government but what he owes to his fellow-man as well.

Sometimes, when it is said that we have too much law in the army, reference is had to the application of the "rules of evidence" to the procedure of courts-martial whereby the members are guided to their conclusions by established rules and not permitted to render arbitrary judgments. But when it is remembered that these same rules of evidence are the result of a thousand years of judicial experience the criticism ceases to have much weight. Moreover, is there any reason why a tribunal of military men should be permitted to deduce presumptions of fact by methods differing from those which the experience of the wisest jurists of centuries has shown to be the best?

Even our military law, brief as it is, is either imperfectly understood or carelessly administered. One has to but read the current reviews of court-martial cases to be surprised at the almost numberless errors, the ignorance of law, and the miscarriage of justice evidenced by the proceedings. It is unjust to our officers to assume that these errors result solely from carelessness. The regard for duty in our service is too high to warrant this assumption. They must then, be charged to an imperfect knowledge of the law, a condition readily susceptible of improvement by the application of the proper remedy.

The history of our country shows that the military has played no unimportant part in its political concerns. True, it seems to stand apart and to hold no certain place in the administration of governmental affairs. Nevertheless it is closely woven into the fabric of our constitutional and institutional history, and plays its part as well as the other elements that enter our system of government. Historically, of course, the military of to-day is an inheritance bequeathed us by former ages, but like every other institution coming to us from antiquity, it has gradually changed to meet the demands of a progressive civilization. From an enemy of human liberty it has come to be the upholder of personal freedom and the guaranty of individual rights; from an engine for forging the chains of slavery it has been transformed into an effective means for striking the shackles from a subject race. Armies have always been potent instruments in the hands of a nation's executive, and have universally reflected the nature of the government they were called upon to support. In early English history, for example, when the king combined all the functions of government in his own person, the military was an agent of tyranny, existing and acting under the sole will of an autocratic ruler. As such it could not be regarded by the great mass of people other than with a feeling of fear and hatred, a feeling that has colored all our military institutions of to-day and still finds expression in traditions that are opposed to a standing army. But the military has changed with the evolution of the science of government and the progress of civilization, and is to-day the bulwark of the civil power when all other safeguards have been swept away. This change, like those that always mark the progress of politics, has been slow and gradual, but at the same time so closely connected with the latter that to fully understand the attributes and office of the military, a knowledge of our political institutions and of their development is necessary.

The army as an integral part of the general scheme of human government must share in the progress common to all the walks of life, and laws in the interest of the individual soldier or civilian are but the outward evidence of the con-

tinued advancement of the human race. In a greater individuality alone is a greater progress possible. But this greater individuality must be consistent with the requirements of an organized society where the rights of all are paramount to those of the individual. Liberty and not license is a principle as applicable to the army as it is to any other profession or community of individuals. Education develops individuality, but by an observance of the law is liberty maintained.

Again, the duties that fall to the lot of army officers are so varied that the latter are often required to act upon legal questions that to the civilian seem wholly outside the military profession. Our international relations with their corresponding complications are increasing, and in our foreign possessions army officers are frequently detailed to positions involving a knowledge of administrative and legal affairs. In the Philippine Islands, for instance, during the last six years the service of officers has embraced practically all the positions involved in the administration of government. In addition to purely military matters they have been called upon to establish civil government, construct codes, govern provinces, administer justice, and in short carry on all the usual functions of government. The successful accomplishment of these things requires not only a high order of ability but an ample knowledge of the laws, customs and institutions of our country.

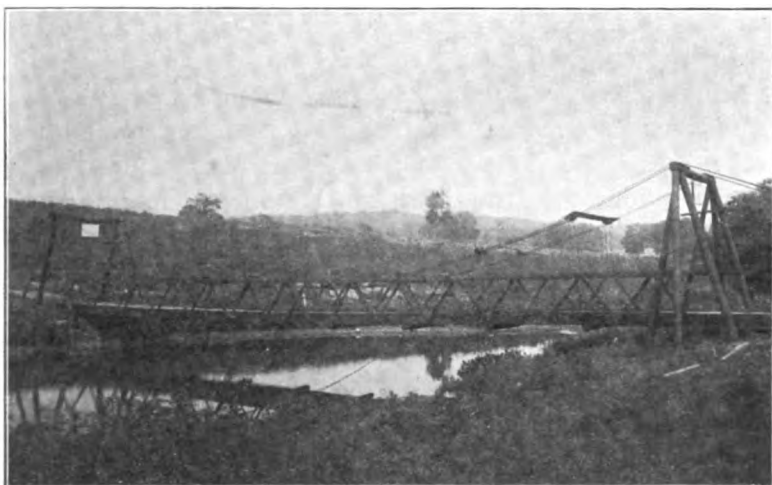
A consideration of the foregoing and of kindred matters has led the authorities to believe that the study of law in the army should be extended and placed on a broader basis. It is thought that a thorough knowledge of those branches usually taught, namely, military and international law, cannot be acquired without an understanding of the elementary principles lying at the foundation of the science itself. For this reason, notwithstanding the limited time, a study of "The Elements of Law" has been added to the course at this school. In addition and for obvious reasons, the study of criminal law and of the laws of evidence has been enlarged, and, recognizing the value of practical work, exercises in moot courts have been added. The study of text books on

military and international law has been omitted for the reason that these subjects are taught in the garrison schools. At the same time it is intended that the work of the moot courts and the preparation of these will add to the student's knowledge of these two subjects.

The course as outlined for the coming year is as follows:

INFANTRY AND CAVALRY SCHOOL.

1. Elements of Law, wherein the student will become familiar with legal phraseology, determine the province of



SUSPENSION BRIDGE.

military and martial law in the general scheme of jurisprudence, and acquire some knowledge of the law of persons and property.

2. Criminal Law, with special reference to military tribunals.
3. Evidence, the rules of which guide tribunals to just conclusions.
4. Moot Courts, exemplifying the procedure and practice of military tribunals (including military commissions and provost courts), the preparation of legal forms, etc.

STAFF COLLEGE.

1. Constitutional Law, emphasizing questions liable to come within the purview of staff officers of the army.
2. Martial Law and Military Government, the course concluding with a graduating thesis on some pertinent subject assigned by the Department of Law.

In regard to the method of instruction it has been thought advisable to adopt the quiz system in connection with assigned lessons from text books, lectures, and the consultation of leading cases. This is more in consonance with modern collegiate education. The present method of reciting requires the student to commit to memory page after page of the text book, which he does by temporarily photographing the same on his mind, with little distinction between the important and less important features. The result is that as soon as the subject is laid aside the whole picture gradually fades from his mind without even the lights and shadows remaining.

With the quiz system the instructor is able not only to determine the intelligence and knowledge of the student, but can bring out and emphasize the principles which the student should and can carry in his mind, and with the aid of which he can solve all similar questions presented for solution.

The assistant instructors for the coming year are Captain Charles Crawford, Twentieth Infantry; Captain H. O. Williams, Fifth Infantry, and Captain Herbert A. White, Eleventh Cavalry.

These officers are all students of the law, Captains Crawford and Williams having been instructors during the previous year, and Captain White being a graduate of the Columbian Law School of Washington, D. C., with the degree of LL. B.

DEPARTMENT OF MILITARY SANITATION AND HYGIENE.

By Lieutenant Colonel JOHN VAN R. HOFF, D. S. G., Instructor.

The course in Military Hygiene, "the care of troops," during the session of 1903-04, consisted in recitation from a text book ("Notes on Military Hygiene for Line Officers"—Woodhull), and lectures elaborating and supplementing the book. Each section of the class devoted twenty hours to recitations in the section rooms, and the entire class attended seven lectures in the lecture room; the course ending with a written examination, to which six hours were devoted.

The subjects of the text book are selection of soldiers, military clothing, food, habitations, camps and marches, sewers and waste, water, preventable diseases, care of troops in the field, and sanitary inspection, covering in all 224 pages, an average of eleven pages to each lesson.

The subjects of the lectures were general observations, recruiting, physical training, hygiene of troop ships, special hygiene of tropic and arctic regions, water and preventable diseases.

The examination questions were as follows:

1. What is meant by Military Hygiene and Sanitation?
Importance to an army.
Responsibility for execution.
Statistics of non-effectiveness from illness and injury in armies.
2. What do regulations require in selecting soldiers?
Table of physical proportions.
Summary of general qualifications.
Enlistment of minors. Some results in different armies.
Considerations in recruitment for war.
3. State advantages and disadvantages in military clothing of cotton, linen, wool, color.
Discuss military footwear.
Waterproofing methods and advantages from hygienic and military standpoints.
4. How is food classified?
Characteristics and functions of the different classes.

- Kind, amount and food classification of the articles of the several official rations.
Necessity for variety in food, with illustrations.
5. What should be considered in determining location of military habitations?
Permanent.
Temporary.
Preparation of site.
Dimensions of squad room.
Number of occupants.
How may habitable space in ordinary dwellings be quickly calculated?
In habitations, what causes affect the health of soldiers and what is the remedy?
6. What methods of disposal of waste are used in army posts?
Describe them.
7. What are the various sources of water supply for a command?
Amount required.
Character determined off-hand.
Dangers from bad waters.
Methods of purification.
Nitrification.
8. Name some of the preventable diseases which most affect armies.
State what you would do to control their spread in your command.
9. Define sepsis, infection, and state how they are controlled.
10. What orders relating to sanitation would you give your men, recently recruited and about entering upon a campaign?

DIRECTIONS.

1. Do not copy the question, but prefix its number to the answer.
2. Number each page and sign each answer with initials.
3. Write the following certificate below the answer to the last question and sign it officially.

"I hereby certify that during this examination I have neither given nor received assistance therein."

Beside the instructor, four medical officers are on duty as assistant instructors in this department (additional to their regular work at the post).

In the development of the course in Military Sanitation and Hygiene the primary object is to convey to the student officer a general idea of the scientific care of troops. It would be impracticable to here teach all that is known of this important subject, but the aim is to bring to the attention of our line officers the reasons for the things which daily experience teaches them are necessary to be done in order to preserve the health, and consequently the efficiency of soldiers.

We do not expect to make all line officers expert military sanitarians, for such implies antecedent knowledge of the fundamental facts of physics, chemistry, anatomy, physiology, bacteriology, mechanics, etc., which comparatively few of them possess, but we do believe that we can sufficiently interest them in the subject so that they will seek to thoroughly inform themselves in the theory and practice of recruiting, a knowledge of which is absolutely essential to an efficient army (and which knowledge we have no reason to believe is wide spread), alimentation, clothing, cleanliness and other important subjects outlined in the course.

With the introduction of military hygiene into the garrison schools where the elements of sanitation will hereafter be taught, the curriculum in the Infantry and Cavalry School will ultimately be placed on a university basis, and recitations eliminated. The course should then consist of lectures, practical exercises, demonstrations, the observation and description of sanitary appliances and collateral reading, to conclude with a comprehensive examination.

Kind, amount and food classification of the articles of the several official rations.

Necessity for variety in food, with illustrations.

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PRACTICAL PROBLEMS FOR ORDINARY GARRISONS.

THE following sets of problems were prepared by the officers named in pursuance to notice of the Department of Tactics at the General Service and Staff College :

THESIS: ORGANIZATION AND TACTICS.

In accordance with Paragraph 25, Regulations and Program of Instruction of the General Service and Staff College, published in G. O. No. 1, A. G. O. 1904, a thesis will be prepared by each student officer and handed in to the instructor, Department of Tactics, not later than noon, June 10, 1904.

Subject of thesis: A series of four practical problems suitable for the progressive tactical instruction of a mixed garrison of the U. S. army, prepared under the following headings:

1. Map Problem.
2. Terrain Ride.
3. March of Concentration.
4. Exercise on the Terrain with Troops (all arms).

Note: For purposes of this thesis use the Fort Leavenworth maps, and assume a garrison of one battalion of infantry, two troops of cavalry, one battery (light) of field artillery, detachment of the hospital corps, and the necessary transportation.

FIRST SET.

BY CAPTAIN R. FOSTER WALTON, SIXTH U. S. INFANTRY.

No. 1. Map Problem.

Circular that would be issued prior to solving Problem No. 1:

Circular } FORT LEAVENWORTH, KANSAS, June —, 1904.
No. 1. }

The officers of the post school will be assembled at Pope Hall at 1:30 P. M., June —, 1904, to solve a "tactical exercise on the map in rear guard and advance guard."

Officers will be required to have complete knowledge of the principles involved, as laid down in Wagner's "Security and Information."

Each officer will bring to the section room, pencils, one-fourth quire legal cap paper, dividers and eraser.

The instructors of the post school will assist the senior instructor in executing the details of the exercise.

The senior instructor will give a short lecture on the exercise at a later date. In this lecture he will give the solution that the majority of instructors decide is the best solution, after considering all the papers.

By order of Colonel Duncan: W. L. SIMPSON,
Captain and Adjutant Sixth Infantry, Adjutant.

FORT LEAVENWORTH, KANSAS, June —, 1904.

PROBLEM NO. 1.

"THREE ARMS COMBINED." TROOPS IMAGINARY.

TACTICAL EXERCISES ON THE MAP IN REAR GUARD HOLDING AN ADVANCE GUARD.

General Idea.

A force (Brown) covered by a rear guard is retreating from Atchison via Frenchman's to Fort Leavenworth, over the Atchison Pike. It is followed by a force (Blue).

Special Idea (Brown).

The advance guard (Blue) overtakes the rear guard (Brown) while the reserve of the rear guard is on road at the Frenchman's.

The rear guard is ordered to delay the pursuing advance guard as long as possible, in order to enable Brown's main column to take up a position on Government Hill.

FORCES ON EACH SIDE.

Brown—Rear Guard.

Infantry, one battalion, 400 men.
 Cavalry, two troops, 200 men.
 Artillery, one battery, six guns.
 Detachment Hospital Corps, four officers, three noncommissioned officers and eleven privates.
 Four wagons, light baggage, one ambulance.

Blue—Advance Guard.

Infantry, two battalions, 800 men.
 Cavalry, two troops, 200 men.
 Artillery, one battery, F, six guns.
 Detachment Hospital Corps, five officers, four noncommissioned officers, and fourteen privates.
 Eight wagons, light baggage, three ambulances.

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Captain and Adjutant Sixth Infantry, Adjutant.

FORT LEAVENWORTH, KANSAS, June —, 1904.

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 Artillery, one battery, F, six guns.
 Detachment Hospital Corps, five officers, four noncommissioned officers, and fourteen privates.
 Eight wagons, light baggage, three ambulances.

Required:

(a) The disposition of the rear guard when the reserve is on the road at the Frenchman's, drawn to scale where practicable.

(b) What dispositions will you make to carry out your orders to delay the pursuing advance guard.

(c) Assume what you would consider the best position to occupy and draw on the map the dispositions you would make to defend the position chosen.

No. 2. Terrain Ride.

Post Circular that would be issued prior to Exercise No. 2.

Circular,) FORT LEAVENWORTH, KANSAS, June —, 1904.
No. 2.)

The officers of the post school will report to the senior instructor of the post school, at headquarters building tomorrow at 1:30 P. M. Tactical exercise to be executed: "Terrain Ride," "Outposts."

The officers will report to Major Murray, Fourth Cavalry, who will assign them mounts for the purpose.

The equipment of officers will be regular field equipment. Each officer will carry in addition to equipment, pencils, one-fourth quire legal cap paper and dividers.

Officers will be required to have complete knowledge of the principles involved, as laid down in Wagner's "Security and Information."

The instructors of the post school will assist the senior instructor in executing the details of the exercise.

By order of Colonel Duncan:

W. L. SIMPSON,
Captain and Adjutant Sixth Infantry, Adjutant.

FORT LEAVENWORTH, KANSAS, June —, 1904.

PROBLEM NO. 2.

TERRAIN RIDE. OUTPOSTS. TROOPS IMAGINARY.

General Idea.

A Blue force is reported approaching Fort Leavenworth from the north and a Brown force from the south.

Special Idea (Brown).

The Brown advance guard is passing through Leavenworth. The point on reaching the south end of Grant Avenue signals: "Enemy in sight." The advance guard commander rides forward and discovers that the enemy has a line of outposts extending from South Merritt Hill on the west to Farragut Avenue on the east.

The detachment commander orders the advance guard commander to establish a line of outposts with his advance guard on the military reservation, facing the enemy, to protect the main body which will bivouac in Leavenworth.

The main body consists of two regiments of infantry, one squadron of cavalry, one battery of field artillery, and the necessary hospital equipment and baggage train of this force.

The advance guard consists of one battalion of infantry, two troops of cavalry, one battery of field artillery, necessary light baggage and hospital troops for this force.

Required:

(a) Write the order that the advance guard commander would issue for formation of the outposts.

(b) Show by diagram on maps where you would place the outposts for the day position.

(c) Study map in connection with the ground and be prepared to show the instructor just where you would place each sentinel or vedette, picket support or supports, and cossack posts; what patrols you would have; where the reserve would be posted, and what you would do in case of an attack; composition of all parts of outposts.

The instructor will allow two hours for this part of problem, when he will go along lines of observation and question you on the above elements.

NO. 2. SHEET NO. 2.

TROOPS IMAGINARY. TERRAIN RIDE. OUTPOSTS.

The commander of the main force decides to hold this position for the night. One of your patrols has captured a Blue patrol of two men.

Required:

(a) Your dispositions for a night position for the outpost line, in detail as required for the day position (Sheet 1).

(b) Write the message you would send to the commander of the main body after questioning prisoners.

(c) What would you do with the prisoners.

Note: Time allowed, one hour. The instructor will pass along the line of observation and question you in regard to the same elements as were given on the day position.

All written solutions will be turned over to the senior instructor of the post school after the completion of the exercise; sheets and maps to be turned in at the same time.

No. 3. Practice March.

Post circular that would be issued prior to solving problem No. 3:

Circular, } FORT LEAVENWORTH, KANSAS, June —, 1904.
No. 3. }

The following named officers of the post school will report to the senior instructor of the post school at 7:45 A. M. to-morrow for a march of concentration.

The regular field equipment and service uniform will be required. Each officer will be provided with note book and pencil. The cavalry and artillery officers will be mounted.

First Battalion Sixth Infantry, Troops E and F Fourth Cavalry, and Twenty-ninth Battery Field Artillery, will be reported to the senior instructor of the post school at 8:00 A. M. to-morrow. The troops will wear the service uniform and equipment for light marching order. Each man will carry a cooked lunch and a canteen of boiled water or coffee.

The assistant instructors will act as umpires, as directed by senior instructor. They will make such reports and perform such duties as he may require.

By order of Colonel Duncan, W. L. SIMPSON,
Captain and Adjutant Sixth Infantry, Adjutant.

FORT LEAVENWORTH, KANSAS, June —, 1904.

PROBLEM NO. 3. SHEET NO. 1.

TACTICAL EXERCISE WITH TROOPS. MARCH OF CONCENTRATION. ALL ARMS.

Instructions for the Detachment Commander.

You have the First Battalion Sixth Infantry, E and F Troops, Fourth Cavalry, and the Twenty-ninth Battery, Field Artillery; nine officers of infantry, five officers of cavalry, and three officers of artillery.

Required:

(a) Assume command of this force and assign two officers to each company, two officers to each troop, and three officers to the battery of artillery.

The extra officer of infantry and cavalry will be assigned to their respective arms as battalion and squadron adjutants.

(b) After forming the detachment march it via the cavalry drill ground, Atchison Pike to Kennedy's.

(c) At this point the platoons separate and each marches under command of an officer over its designated route to the rendezvous at the northeast corner of West End Parade.

(d) The exact time all platoons are to concentrate at the rendezvous will be announced to the platoon commanders by you, and so fixed that the one having the longest route will have thirty minutes rest at Kennedy's.

(e) After concentration at the West End Parade, a rest of ten minutes will be allowed, after which the troops will be formed and marched to their respective company, troop or battery quarters by the first sergeants and dismissed.

(f) Different hours of concentration on West End Parade will be assigned to different arms of the service.

(g) Render a report and require your adjutant to render a report, showing hour of assembly, hour of departure, hour of arrival at Kennedy's, and hour designated for the concentration of troops. The march will be made in accordance with the Infantry and Cavalry Drill Regulations.

(h) You will turn over the command to platoon commanders at Kennedy's and return by shortest route to northeast corner of West End Parade, where troops will be dismissed.

(i) The baggage and hospital detachment will be conducted back to the rendezvous by yourself, accompanied by your adjutant and sergeant major.

(k) Distance and time required by each to march over each route should be calculated before starting, and calculations or time handed umpire before starting, so that the calculation may be compared with each actual march made.

March of Concentration—with Troops. Sheet No. 2.

Routes for infantry marches and instructions for platoon commanders.

First Platoon, Co. A.—From Kennedy's 27-7-41-43 Hancock Avenue to northeast corner West End Parade.

Second Platoon, Co. A.—From Kennedy's 27-7-5-E-D-43 Hancock Avenue to northeast corner West End Parade.

First Platoon, Co. B.—From Kennedy's 25-21-17-7-3-1 Penn Lake to northeast corner West End Parade.

Second Platoon, Co. B.—From Kennedy's 25-17-7-3-1 over Sheridan's Drive to Hancock Avenue, Hancock Avenue to northeast corner West End Parade.

First Platoon, Co. C.—From Kennedy's F-E-D Hancock Avenue to northeast corner West End Parade.

Second Platoon, Co. C.—From Kennedy's F-16-14-8-2-C Garden Road, Hancock Avenue to northeast corner West End Parade.

First Platoon, Co. D.—From Kennedy's F-16-14-8-2-M Grant Avenue, Pope Avenue to northeast corner West End Parade.

Second Platoon, Co. D.—From Kennedy's F-16-14-8-2-M Grant Avenue, McPherson Avenue to northeast corner West End Parade.

Marches will be conducted in accordance with paragraphs 657 and 658 Drill Regulations, modified as circumstances may require, and consider start from Kennedy's an original start.

Render a report embodying in chronological order all that happens on march from assembly on West End Parade to dismissal of troops at the same point.

Include in report, rate of march, halts, time of departure from Kennedy's, and time of arrival at West End Parade. Turn in your report to the senior instructor of Post School. Your platoon is enclosed in brackets of red ink.

The senior officer will take command of the company until arrival at Kennedy's.

March of Concentration—with Troops. Sheet No. 3.

Routes for cavalry marches.

Instructions for Commanders of Cavalry.

The senior officer of cavalry will form the troops in a squadron of two troops and command the cavalry until arrival at Kennedy's. Each troop will be formed into two platoons.

Routes for cavalry.

First Platoon, E Troop.—From Kennedy's H-8-J-29-39-25-21-17-7-41-1 Penn Lake, McPherson Avenue to northeast corner West End Parade.

Second Platoon, E Troop.—From Kennedy's H-I-J-29-31-15-7-41-1 Penn Lake, McPherson Avenue to northeast corner West End Parade.

First Platoon, F Troop.—From Kennedy's H-I-J-K-35-33-31-37-39-25-G-E-D Hancock Avenue to northeast corner West End Parade.

Second Platoon, E Troop.—From Kennedy's H-I-J-29-25-27-7-5-E-43 Hancock Avenue to northeast corner West End Parade.

Marches will be conducted in accordance with paragraphs 981-982 Cavalry Drill Regulations, modified as circumstances may require, and consider start from Kennedy's an original start.

Render a report embodying in chronological order all that happens on the march from assembly on West End Parade to dismissal of troops at same point.

Include in report, rate of march, halts, time of departure from Kennedy's, and time of arrival at West End Parade.

Turn in your report to the senior instructor of the Post School.

Your platoon is enclosed in brackets of red ink.

The senior officer of the troop will take command of the troop until arrival at Kennedy's. The junior lieutenant will act as adjutant and make the same report as required of the senior officer of cavalry and will accompany his platoon back to place of rendezvous.

March of Concentration—with Troops. Sheet No. 4.

Routes for artillery marches and instructions for officers of artillery.

The battery will be divided into three platoons by the senior artillery officer.

Routes for artillery:

First Platoon, Twenty-ninth Battery.—From Kennedy's H-I-22-24-20-15-16-F-E-43 Hancock Avenue to northeast corner West End Parade.

Second Platoon, Twenty-ninth Battery.—From Kennedy's H-I-22-26-18-16-14-8-2-C Hancock Avenue to northeast corner West End Parade.

Third Platoon, Twenty-ninth Battery.—From Kennedy's H-I-22-28-14-8-2-C Hancock Avenue to northeast corner West End Parade.

Marches will be conducted as required by paragraph 1054 Artillery Drill Regulations, modified so as to have same rate as is usually taken by cavalry in so far as circumstances will permit; consider start at Kennedy's an original start

Render a report embodying in chronological order all that happens on the march from assembly on West End Parade to dismissal of troops at same point.

Include in report, rate of march, halts, time of departure from Kennedy's and time of arrival at Kennedy's, and time of arrival at West End Parade.

Turn in your report to the senior instructor of the post school.

Your platoon is enclosed in brackets of red ink.

The senior officer of artillery will take command of battery until arrival at Kennedy's.

NO. 4. EXERCISE WITH TROOPS.

Post Circular that would be issued prior to Exercise No. 4:
 Circular, } FORT LEAVENWORTH, KANSAS, June —, 1904.
 No. 4. }

Tactical exercise to be executed by the following named troops and officers of the post school :

EXERCISE.

“Attack and defense of a position.”

Troops, First Battalion Sixth United States Infantry.

Troops E and F Fourth United States Cavalry.

Twenty-ninth Battery Field Artillery.

Officers will be assigned to the various commands by the senior instructor of the post school.

The officers of post school will report to the senior instructor of the post school, who will give them detailed instructions as to what will be required of them.

The above named troops will comply with any orders received that may be given by school officers, in compliance with this circular.

By order of Colonel Duncan, W. L. SIMPSON,
Captain and Adjutant Sixth Infantry, Adjutant.

FORT LEAVENWORTH, KANSAS, June —, 1904.

Captain Poore, Sixth Infantry, will carry out the following problem :

PROBLEM NO. 4.

TACTICAL EXERCISE WITH TROOPS. ATTACK AND DEFENSE OF A POSITION.

General Idea.

A Brown force is guarding the Leavenworth Water Works. A Blue force is advancing from the north to capture and destroy the Leavenworth Water Works.

Special Idea (Blue).

The Blue force consists of A and B Companies, Sixth Infantry, A Troop Fourth Cavalry, four guns Twenty-eighth Battery Field Artillery, and such detachment hospital corps as may be necessary. No baggage wagons will be needed.

Required :

(a) You will have your troops formed on the West End Parade at 9:00 A. M. to-morrow.

(b) You will attack the Brown force defending the Leavenworth Water Works.

(c) Your troops will wear blue shirts, service trousers, and will have the regular field equipment for light marching order. Each man will be provided with 100 rounds blank ammunition, and each gun with twenty rounds of blank ammunition.

(d) The rules for field exercises in minor tactics will be observed.

(e) You will look over the ground and write out the order you intend to issue for the attack. Hand in the order to the senior umpire.

(f) All officers will be assembled after the exercise for a discussion of it by the senior umpire.

Problems will not be discussed with opponents before solution.

FORT LEAVENWORTH, KANSAS, June —, 1904.

Captain Bolles, Sixth Infantry, will carry out the following problem :

TACTICAL EXERCISE WITH TROOPS. ATTACK AND DEFENSE OF A POSITION.

General Idea.

A Brown force is guarding the Leavenworth Water Works. A Blue force is advancing from the north to capture and destroy the Leavenworth Water Works.

Special Idea (Brown).

The Brown force consists of C and D companies of Sixth Infantry, two guns Twenty-ninth Battery Field Artillery, Troop B Fourth Cavalry, and such detachment hospital corps as may be necessary. No baggage wagons will be needed.

This is the only source of water supply for the City of Leavenworth, and you have orders to hold it at all hazards.

Required:

(a) You are to make such dispositions as you deem best to hold this position, including trenches needed, if you think any desirable.

(b) When attacked you will make the same dispositions during the action as you would make in actual warfare.

(c) The rules for field exercises in minor tactics will be observed.

(d) Troops will wear service uniform, and the regular field equipment for light marching order. Each man will be provided with 100 rounds of blank ammunition, and each gun with twenty rounds of blank ammunition.

(e) You will be in position by 8:00 A. M. June 12, 1904.

(f) You will look over the ground and write out the order for the occupation of the position. Hand in a copy of order to the senior instructor of the post school.

(g) All officers will be assembled at — P. M. June 12, in order that the senior umpire may render a short lecture on the exercise executed.

Problems will not be discussed with opponents before solution.

SECOND SET.

By Lieutenant F. E. BUCHAN, Third U. S. Cavalry.

No. 1. Map Problem.

SECURITY AND INFORMATION.

ADVANCE GUARD AND OUTPOSTS ON THE MAP. ALL ARMS.

General Idea.

A Blue army in Missouri is operating against a Brown army which is advancing from the vicinity of Lawrence, Kansas.

The first corps of the Blue army has reached Platte City, Missouri, when the Blue commander decides to cross the Missouri River by the bridges at Leavenworth and Fort Leavenworth and attack the Brown army in Kansas. He accordingly directs the commander of the first corps to detach the first and second brigades of the first division of his

corps to seize and hold the bridges across the Missouri at Leavenworth and Fort Leavenworth, respectively.

Special Idea (Blue).

The advance guard of the second brigade, first division, first corps, consists of Troops A and B, Third Cavalry, Third Battalion Twenty-fourth Infantry, and the Tenth Battery Field Artillery.

At 9 A. M. the head of the reserve has reached the west end of the bridge at Fort Leavenworth. From information gained from the inhabitants, it is learned that a strong force of Browns camped last night at Tonganoxie, fifteen miles southwest of Leavenworth. At 8:30 A. M. Brown cavalry patrols were seen near the Frenchman's and in the vicinity of Metropolitan Avenue and Twentieth Street. This information is transmitted to the brigade commander, and at 9:15 A. M. the advance guard commander receives an order to post his advance guard as an outpost covering the approaches of the bridge, pending the crossing of the brigade.

Required:

1. Indicate on the map the location, strength and composition of all parts of the advance guard at 9 A. M.
2. The order of the advance guard commander establishing the outpost.
3. Indicate on the map the location, strength and composition of all parts of the outpost.

NO. 2. SHEET NO. 1.

TERRAIN RIDE. REAR GUARD AND POSITION.

General Idea.

A Blue force consisting of a brigade of infantry, a squadron of cavalry, and a battery of field artillery were defeated by a superior force of Browns yesterday at Easton, fifteen miles northwest of Leavenworth, and is now retreating into Missouri via Fort Leavenworth and the Rock Island wagon bridge.

The Browns are known to be in pursuit.

Special Idea (Blue).

The rear guard of the retreating force consists of Troops A and D Third Cavalry, Third Battalion Twenty-fourth Infantry, and the Tenth Battery Field Artillery.

At 10 A. M. the head of the main body has reached Grant Monument, Fort Leavenworth, Kansas.

Required :

After an observation of the terrain, indicate on the map the location, composition and strength of the various parts of the rear guard.

Time for solution, one hour.

NO. 2. SHEET NO. 2.

TERRAIN RIDE. REAR GUARD AND POSITION.

Special Idea (Blue).

The main body of the Blues has reached the Rock Island bridge and is ready to begin crossing, when it is discovered that the damage to the bridge, which was supposed to have been slight, is serious enough to require repairs before it will be safe to cross it. It is estimated that a minimum of six hours will be required to complete the necessary repairs. The Blue commander decides to undertake the work, and directs the commander of the rear guard to occupy a position and check the pursuit of the Browns until the retreat of the Blues can be resumed.

At 10:15 A. M. a telephone message is received to the effect that a small patrol of Browns has just been seen at Lowmont, ten miles northwest of Leavenworth.

Required :

A tracing showing the position occupied and the disposition of the troops of the rear guard.

Time for solution, one hour.

NO. 2. SHEET NO. 3.

TERRAIN RIDE. REAR GUARD AND POSITION.

Special Idea (Blue).

At 10:45 A. M. a second telephone message is received from Lowmont, stating that a force of Browns, consisting of cavalry, infantry and artillery, is approaching that place from the west.

Required:

1. The steps the commander of the Blue rear guard would take to strengthen his position.
2. Show by a tracing the location and extent of such works of defense as would be suitable and capable of completion in the time available.

NO. 3.

PRACTICE MARCH. MARCH OF CONCENTRATION.

General Idea.

A Blue army, which has been operating along the line of the Missouri River from Atchison to Kansas City, is now concentrating at Kansas City.

Special Idea (Blue).

A detached force, consisting of Troops A and D, Third Cavalry, Third Battalion Twenty-fourth Infantry, Tenth Battery of Field Artillery, detachment of Hospital Corps, and a train of ten army wagons, which has been proceeding by marching to rejoin its command at Kansas City, went into camp on the Atchison Pike, one and one-half miles west of the Frenchman's, at 4 P. M.

At 6 P. M. the commanding officer of this force receives instructions to the effect that the Missouri Pacific Railway has been repaired and that transportation for his entire force to Kansas City will be at the station at Fort Leavenworth at 8 A. M. the following day.

It is important that the train be not delayed longer than is absolutely necessary to load.

The commanding officer decides to march his command by the following route, viz :

The cavalry via the Frenchman's, Taylor's, Millwood Road, Prison Cemetery, McPherson Avenue and Riverside to the Missouri Pacific depot.

The infantry (less one platoon) via the Frenchman's, Salt Creek Village, and thence east to Hancock Avenue, Pope Avenue, Grant Avenue, and Kearney Avenue to the Missouri Pacific station.

The artillery, via the Atchison Pike, Atchison Cross Road to Grant Avenue via New Penitentiary, north on Grant Avenue to Meade Avenue, thence to Missouri Pacific station via Sherman Hall.

The wagon train, with one platoon of infantry as escort, via the route described for the infantry.

Required:

1. A schedule showing the hours for the necessary service calls for the several detachments of the command from first call for reveille to "forward, march."

2. The time of departure, and the marching time for each detachment.

3. Assuming that the necessary facilities for loading are at hand, at what hour could the troop train leave Fort Leavenworth?

4. The number and kinds of cars necessary to transport this force.

No. 4.

EXERCISE ON TERRAIN WITH TROOPS. ALL ARMS. ATTACK AND DEFENSE OF A POSITION.

General Idea.

A Blue reconnoitering force consisting of a brigade of infantry and a battery of field artillery was defeated yesterday at Tonganoxie, Kansas, fifteen miles southwest of Leavenworth, and is now rapidly retreating into Missouri, by way of Fort Leavenworth and the Rock Island wagon bridge to rejoin its corps at Platte City.

The Browns are pursuing vigorously.

Special Idea (Blue).

The commander of the Blue brigade, upon his advance, detached a force consisting of the Third Battalion Twenty-Fourth Infantry and two guns of the Tenth Battery of Field Artillery to guard the Rock Island wagon bridge and protect his line of retreat.

At 8:20 A. M. the lookout on Cemetery Hill signals that a Brown cavalry patrol is seen approaching from the south on the Atchison Pike in the vicinity of Metropolitan Avenue.

Special Idea (Brown).

The commander of the Browns has detached a force consisting of Troops A and D Third Cavalry and four guns of the Tenth Battery Field Artillery with orders to get in rear of the retreating Blue force and destroy the Rock Island wagon bridge and cut off the retreat of the Blues in this direction.

At 8:25 A. M. the point of the Brown force has reached the Atchison cross-roads and discovers what appears to be a Blue sentinel on South Merritt Hill.

THIRD SET.

By Lieutenant RAYMOND S. BAMBERGER, Seventh U. S. Cavalry.

No. 1. Map Problem.

FORT LEAVENWORTH, KANSAS, June 10, 1904.

PROBLEM NO. 1. SHEET NO. 1.

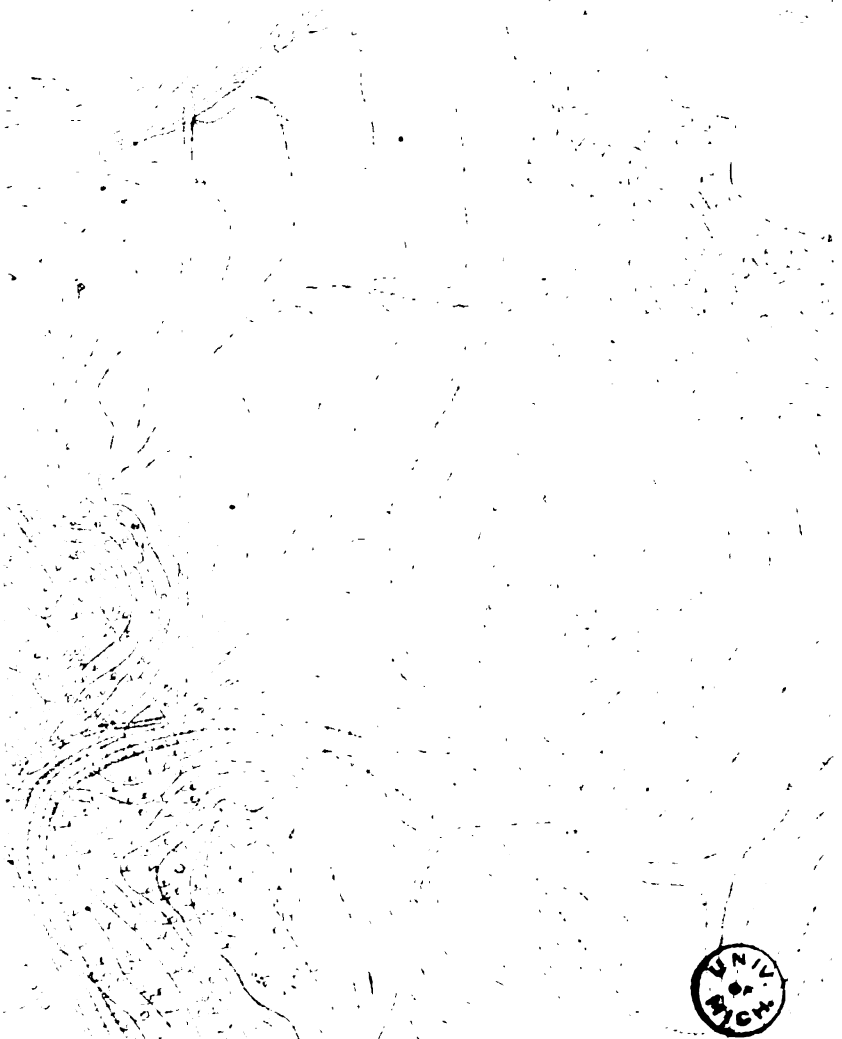
MAP EXERCISE. ADVANCE GUARD.

General Idea.

A Brown force is operating in Missouri, east of Fort Leavenworth. A Blue force is operating near Lowmont, eight miles west of Fort Leavenworth. The Brown commander sends a brigade of infantry, a regiment of cavalry and a battery of field artillery to move via the Atchison Pike in order to cover the crossing of the Brown army over the Rock Island wagon bridge.

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the Rock Island wagon bridge



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Special Idea.

The detachment commander receives his orders to move out at 6:00 A. M. June 11, 1904. These orders are received at 6:00 P. M. June 10, 1904. His advance guard consists of Companies A, B, C and D, First Infantry, Troops A and B, First Cavalry, and the First Battery Field Artillery. The advance guard moves via Pope Avenue, Hancock Avenue, Cross Roads northwest of target range, Salt Creek, Atchison Pike.

Required:

(a) The orders of the detachment commander for the march.

(b) A drawing on the map showing accurately to scale, the position, composition and strength of each part of the advance guard when the reserve has reached the corner of Pope and Grant Avenues.

No. 2. Terrain Ride.

FORT LEAVENWORTH, KANSAS, June 10, 1904.

PROBLEM NO. 2. SHEET NO. 1.

TERRAIN RIDE. REAR GUARD.

General Idea.

A Blue force is retreating through Leavenworth via the Atchison Pike. A superior Brown force is pursuing vigorously.

Special Idea.

You are in command of the Blue rear guard, consisting of Companies A, B, C, and D, First Infantry, Troops A and B, First Cavalry, and the First Battery Field Artillery, with orders to delay the pursuit as long as you can.

Required:

A diagram, to scale, on the map, showing position, strength and composition of the various parts of your rear guard, when the reserve has arrived at Atchison cross-roads.

PROBLEM NO. 2. SHEET NO. 2.

TERRAIN RIDE. REAR GUARD.

You decide to take up a position on Atchison and Government Hills.

Required:

- (a) Your orders for assuming this position.
- (b) A diagram (tracing) showing the position assumed, together with your disposition. Mark on the tracing three permanent points so tracing may be oriented.
- (c) How will you withdraw your troops? (You have forced the Browns to deploy and now wish to withdraw.)

No. 3. Practice March.

FORT LEAVENWORTH, KANSAS, June 10, 1904.

PROBLEM NO. 3. SHEET NO. 1.

MARCH OF CONCENTRATION.

General Idea.

A Brown army is operating twenty miles northwest of Fort Leavenworth. A Blue army is holding the line from the Missouri River, through Hancock Hill and to the west. A battery of artillery and two companies of infantry are stationed at Hancock Hill. A troop of cavalry is at Plum Creek Bridge, 1000 yards north of Taylor's. Fresh troops have arrived at the corner of Grant and Metropolitan Avenues.

Special Idea.

The commanding general decides to relieve part of the line. He orders two companies of infantry to march via Grant and Kearney Avenues, west to quarry on Sheridan's Drive, north to Hancock Hill and there deliver orders to the infantry stationed there to move out in one hour via Point Lookout, Prison Cemetery, Penn Lake, Old Prison, McPherson, Scott, and Pope Avenues to Grant Avenue to intersection with Metropolitan Avenue. The officer commanding the relieving force will instruct the artillery to move out from Hancock Hill, via the same route as taken by the infantry, but at such a time as to reach the rendezvous

(Grant and Metropolitan Avenues), at the same time as the infantry. The cavalry will move via Grant, Pope, McClellan and McPherson Avenues, to the Old Prison, Penn Lake, Prison Cemetery, Millwood Road, Taylor's, Plum Creek Bridge, and will relieve the cavalry at that place. One hour after this, the relieved cavalry will start back and will march via Taylor's, the Frenchman's, Atchison Pike to the Atchison cross-roads, south to Metropolitan Avenue, east to Grant Avenue.

The commanding general will so time the departure of the relieving troops that all will arrive at the rendezvous, at intersection of Grant and Metropolitan Avenues at 4:00 o'clock P. M. the same date.

Required.

- (a) Time of departure of infantry from rendezvous.
- (b) Time of departure of cavalry from rendezvous.
- (c) Time of departure of artillery from Hancock Hill.

Note: Each arm will use its ordinary marching rate.

No. 4. Exercise With Troops.

FORT LEAVENWORTH, KANSAS, June 10, 1904.

PROBLEM NO. 4. SHEET NO. 1.

ATTACK AND DEFENSE OF CONVOY. WITH TROOPS.
(Preliminary Order.)

General Orders, } FORT LEAVENWORTH, KAN.,
NO. 1. } June 9, 1904.

1. In all field exercises no men will be left behind except the sick, prisoners and necessary guard and the following:

In each company, noncommissioned officer in charge of quarters and one cook. In each troop or battery, noncommissioned officer in charge of quarters, one cook and the stable sergeant.

2. The provisions of the "Rules for Field Exercises in Minor Tactics" will be strictly complied with.

3. Companies A, B, C and D, First Infantry and one platoon First Battery Field Artillery will report to the chief umpire, Lieutenant Colonel A. B. C., to-morrow morning in light marching order at 9:15 A. M., northeast corner West End Parade. Uniform: Brown.

Troops A and B First Cavalry, and two platoons First Battery Field Artillery will report at same place at 8:30 A. M. The cavalry will be armed with revolver and carbine. Uniform: blue.

4. Each soldier will have ten rounds blank ammunition.

5. The quartermaster will cause twelve escort wagons to report at the northeast corner of the West End Parade at 9:15 A. M. to-morrow.

By order of Colonel A. B. C.

(Signed)

M. V.,

*First Lieutenant Artillery Corps,
Acting Adjutant.*

General Idea.

A Brown force is operating about twenty miles south of Leavenworth against a Blue force further south. The Browns draw supplies from Fort Leavenworth. The Blues are threatening the Brown trains with small raiding parties.

Special Idea (Brown).

For the officer commanding the Brown forces, twelve escort wagons, four companies of infantry and one platoon of artillery will report to you. The twelve wagons represent a train of eighty wagons, which you will so arrange as to represent sections of proper length and at regulation section distance. You will proceed toward Leavenworth with your train, which contains ammunition for the Browns. The escort is as above indicated. You will leave at 9:30 A. M. You are in command of the convoy, and you will designate the officers in charge of the escort and of the train respectively.

Special Idea (Blue).

For the officer commanding Blue forces, two troops of cavalry, representing four provisional troops, and two platoons of artillery, will report to you. You will proceed to Salt Creek and remain there until 9:30 A. M., when you will proceed westward, going on road north of Atchison Hill and toward the Target Range, and then towards Grant Avenue.

All officers will submit a concise report of their operations before 8:30 A. M., June 11, 1904.

FORT DES MOINES, IOWA.

By HENRY SHINDLER.



THE occupation of Fort Des Moines, Iowa, by a squadron of cavalry gives the mounted arm of our service a station that should make the happiness of the officer and trooper quite complete. Work on buildings for a second squadron has reached a stage that will permit their occupancy late in the fall, while another appropriation is ready for the construction of buildings for a third squadron. Their completion is expected by fall of 1905, and the cost to the government for this post will have been \$2,000,000.

Fort Des Moines is four miles due south of the business center of Iowa's capital, Des Moines. The site upon which the post is built could not have been chosen with better judgment to meet all the requirements of a first class cavalry station. This the new post is in every sense. Located upon a high plateau, the surrounding view furnishes a magnificent landscape. There is not a richer agricultural section in all Iowa.

Des Moines is in the very hub of the State's great railway system, and the post is reached by a splendidly operated electric line, furnishing excellent service for both passengers and freight. The distance between Fort Leavenworth and this new cavalry garrison is less than 200 miles, and reached in a most direct line by the Chicago Great Western Railway, covering the distance in less than six hours.

Fort Des Moines is the only military post within the limits of Iowa. There have, however, been two Forts Des

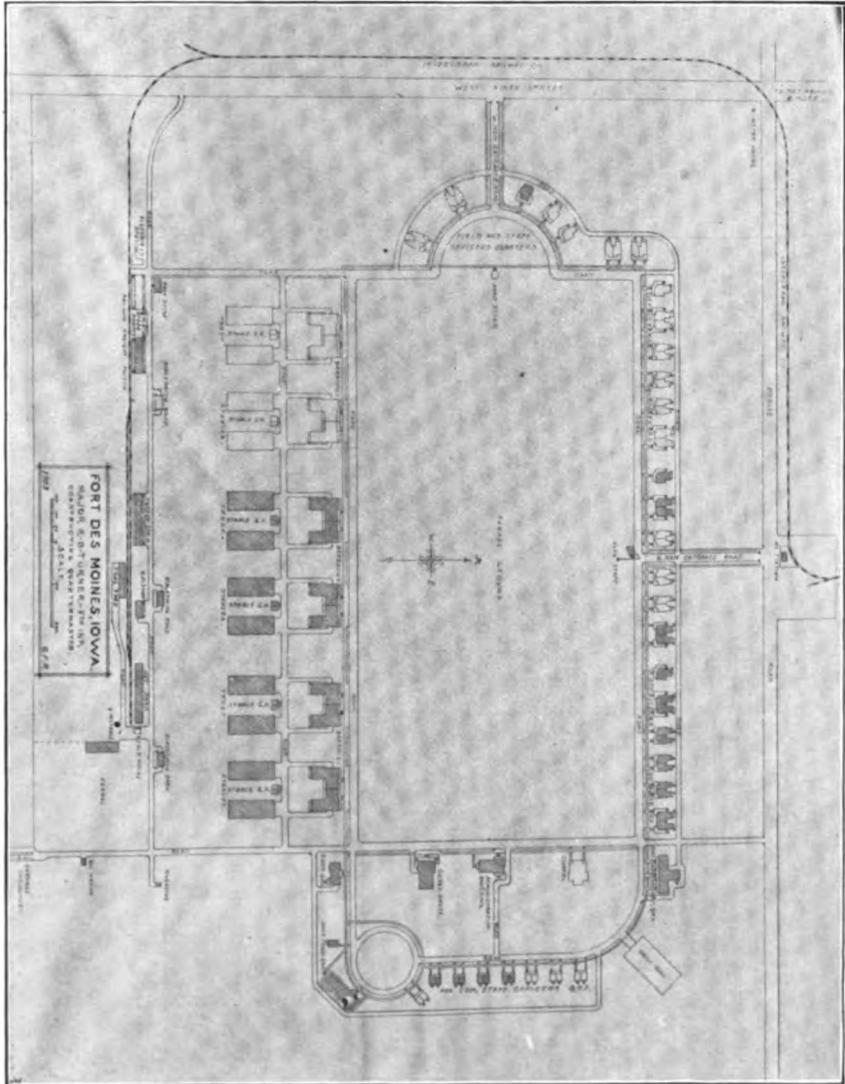
Moines in past years. The first was established by Lieutenant Stephen W. Kearney, in 1834, and was situated in Lee County, but continued only three years. The second Fort Des Moines was established by Captain James Allen,* First Dragoons, in 1842, and was situated at the junction of the Des Moines and Raccoon Rivers, now in the business and railroad center of Des Moines.

Captain Allen was sent by the War Department to select a site for a post, being stationed at that time at Fort Sandford, near the present city of Ottumwa. In his report why a post should be built upon the site he selected he assigns the following reasons:

"The soil is rich. Wood, stone, grass and building material close at hand. It is equal distance from the Mississippi to the Missouri. It will also be about the head of keel boat navigation on the Des Moines. I think it much better than any other point because it will be hard to get supplies further up, and no point or post that may be established on this river need be kept up more than three years, or until the Indians shall leave.

"I would build but common log cabins or huts for both men and officers, giving them good floors, windows, doors, stables, very common but close and roomy, pickets, block houses, corrals, and such like. The buildings to be placed in relation to comfort, convenience and good taste, and of defense, so far as the same may comply with the first rule.

* Captain James Allen, the commandant of the fort from its first occupation to within a few weeks of its abandonment, was a native of Ohio, born in 1806, and at the age of nineteen appointed to the Military Academy from the State of Indiana. He was graduated July 1, 1829, and appointed as 2d lieutenant in the Fifth Infantry; joined his regiment at Fort Brady, where he served until the 5th of March, 1833, when he was transferred to the new dragoon regiment as second lieutenant. From this time until his death his services on the frontier were continuous and of the highest value to the government. Joining his regiment at Fort Dearborn, he remained on staff duty until his promotion as first lieutenant May 31, 1835, when he was assigned to certain engineer duties in connection with the reconnaissance of the Indian country. He served during the next decade at Forts Leavenworth, Gibson, Atkinson and Sandford, from whence he marched to the establishment of Des Moines. On the abandonment of that work, he was appointed lieutenant colonel and commander of the Mormon Battalion of Missouri Volunteers for the Mexican War, and was en route to New Mexico with his command, when he suddenly died near Fort Leavenworth, August 23, 1846, at the early age of forty, and was laid to rest in its cemetery.



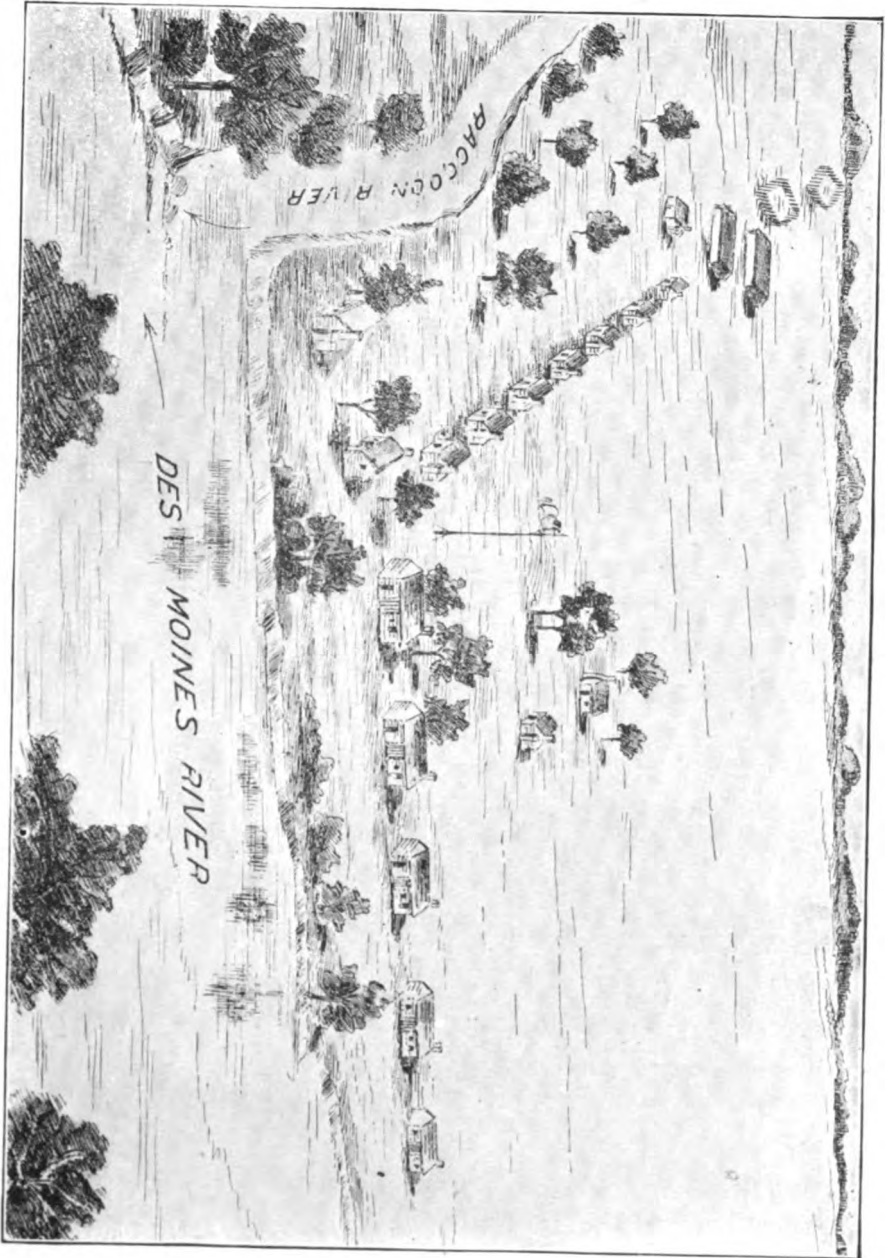
Ten mechanics, five laborers and four yoke of oxen ought to be furnished by the quartermaster's department, all to be ready to go up and begin early in the spring. Pine lumber for the necessary parts of the buildings ought to be sent up in keel boats in the spring rise of the river. Provisions, corn, etc., ought to be sent up at the same time."

Noting the character of the buildings which Captain Allen recommended for the Fort Des Moines of 1842, the younger generation of officers can form a good idea as to the few conveniences enjoyed by their brother officers in the earlier history of our army, compared to those now provided by a generous government.

The post was, however, not destined to remain many years upon the map of Iowa, except in memory, for in 1846 it was abandoned under the following orders:

"First Lieutenant Grier,* commanding Allen's company, First Dragoons, will as early as practicable, take up his line of march from Fort Des Moines for Fort Leavenworth escorting all the Fox Indians, who have not left the Territory of Iowa, in accordance with their treaty stipulations of October, 1842, to their permanent homes, as designated by the President of the United States.

*William N. Grier entered the U. S. Military Academy in 1831, graduating in 1835. He served in the regular army thirty years. Until the Civil War his service was for the most part on the frontier, though he was assistant instructor of infantry and cavalry tactics at West Point in 1840 and 1841, and a participant in the Mexican War. He was at several points in Iowa from 1843 to 1846, mainly at Fort Des Moines No. 2. He fought the Apaches in 1849 and was once wounded. He served in New Mexico from 1849 to 1856, when he marched to California, whence he was soon ordered north to Oregon. He went to Fort Walla Walla in 1857, where he remained until 1861, during which time he participated in many skirmishes and battles with the Spokane and hostile Indians. At the commencement of the Civil War he was promoted to major of the Second Regular Cavalry and was acting assistant inspector-general of the Army of the Potomac, 1861-62. He took part in many battles, and was wounded at Williamsburg May 5, 1865. He was stationed at Davenport, Iowa, as superintendent of volunteer recruiting service for this State, from March 1863 to June 12, 1865. He was brevetted brigadier-general in the regular army and promoted to colonel of the Third Cavalry. He served with his regiment at Fort Union, N. M., from July 12, 1868 to May 1870. His last command was at Camp Halleck, Nevada, December 15, 1870, at which date this gallant officer was retired from active service. He died at Napa City, California, July 8, 1885.

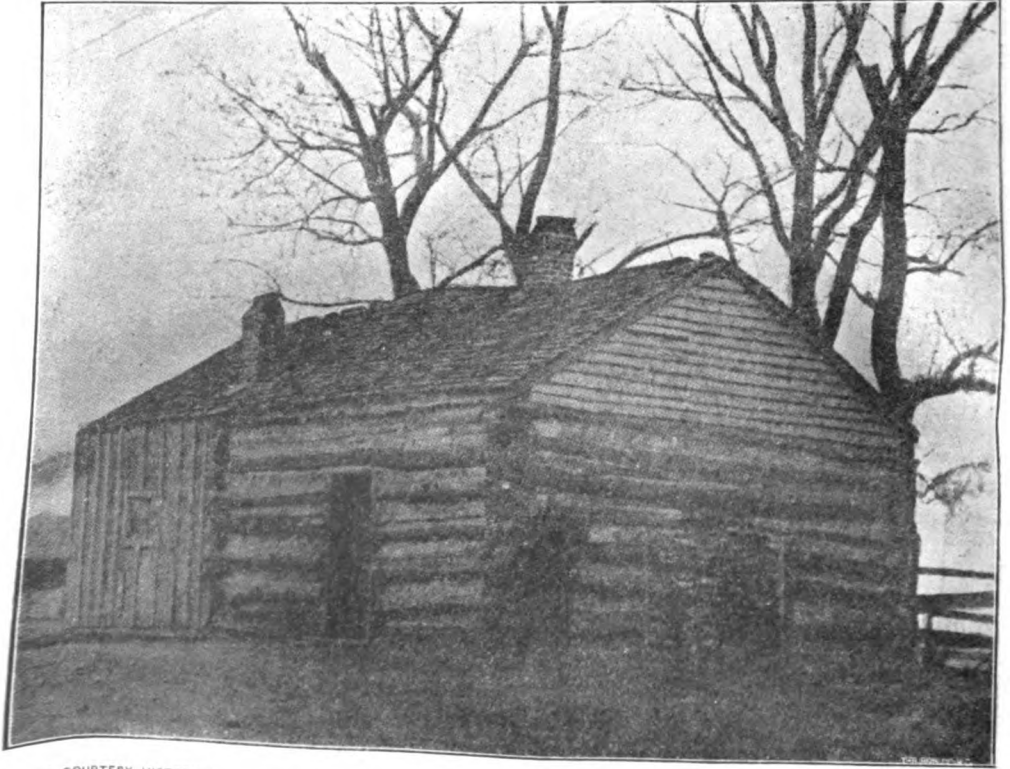


BY COURTESY HISTORICAL DEPARTMENT IOWA.

FORT DES MOINES, IN 1844—THE PRESENT SITE OF THE CITY OF DES MOINES.

"Lieutenant Grier will leave at Fort Des Moines one steady noncommissioned officer and two privates, for the purpose of taking care of all of the public buildings, quartermaster's and subsistence stores, ordnance and ordnance stores, and all other public property, until instructions are received from the War Department for their final disposition.

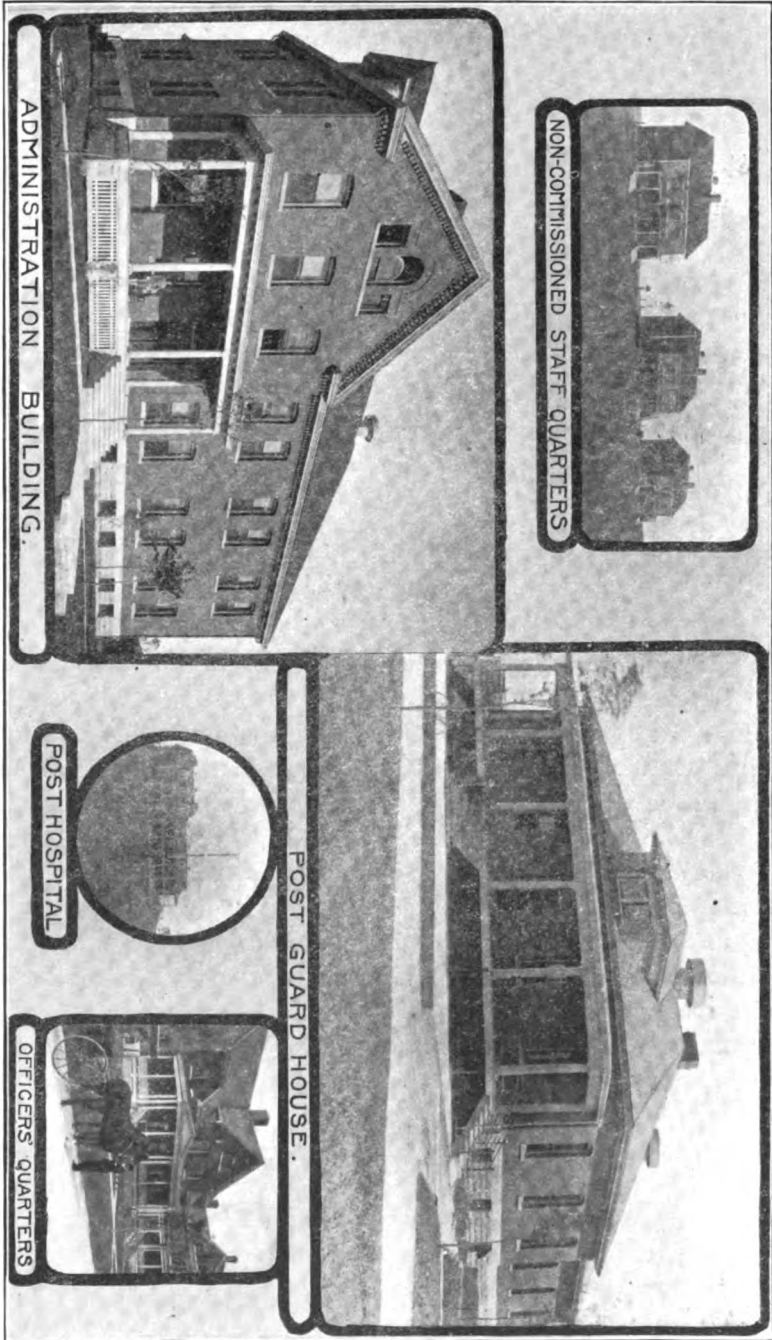
"Allen's company of dragoons will, after having executed the above duty, form a part of the permanent garrison of Fort Leavenworth."



BY COURTESY HISTORICAL DEPARTMENT IOWA.

THE QUARTERS OF LIEUTENANT WM. N. GRIER. FIRST HOUSE ERECTED IN FORT DES MOINES, IA., IN 1842.

Ten years ago the present chairman of the House Military Committee, Hon. J. A. T. Hull, of Des Moines, entered Congress. He sought a place on the military committee, and succeeded. It had long been his hope that some day he



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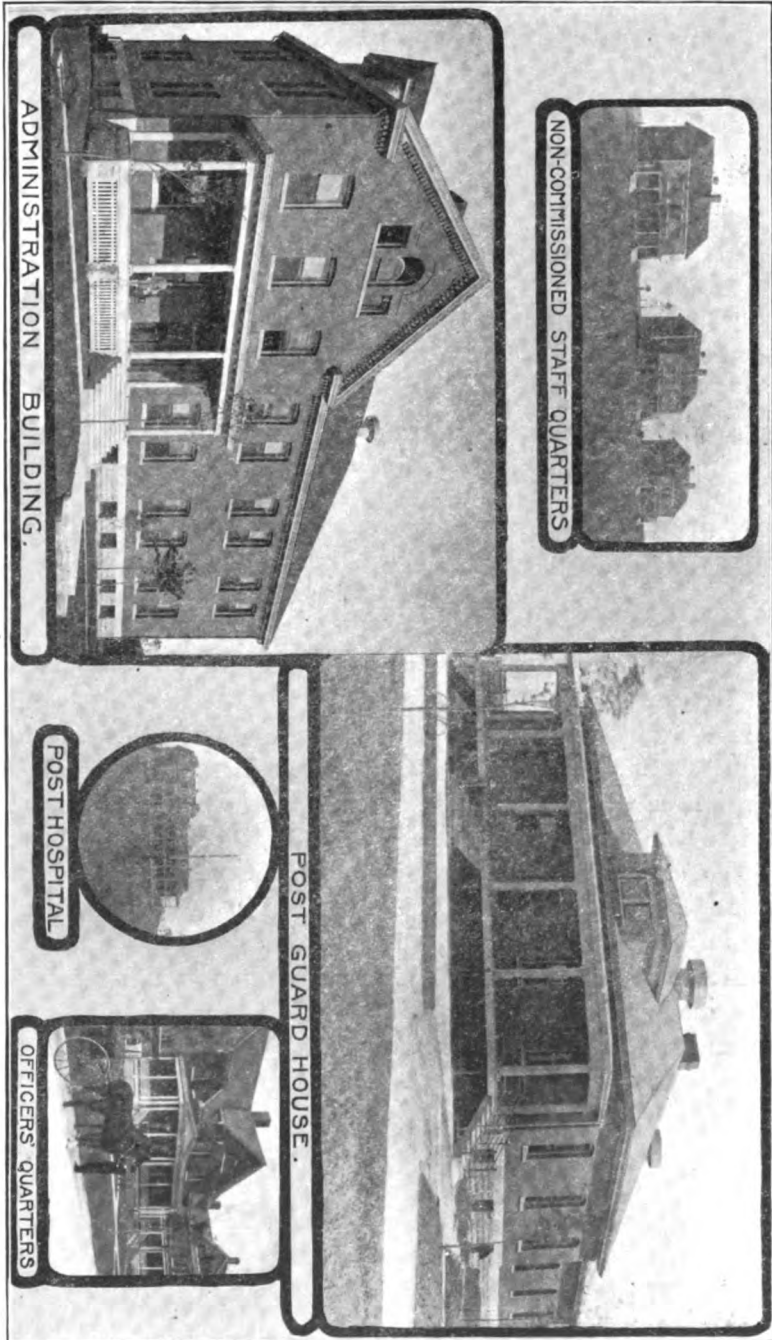
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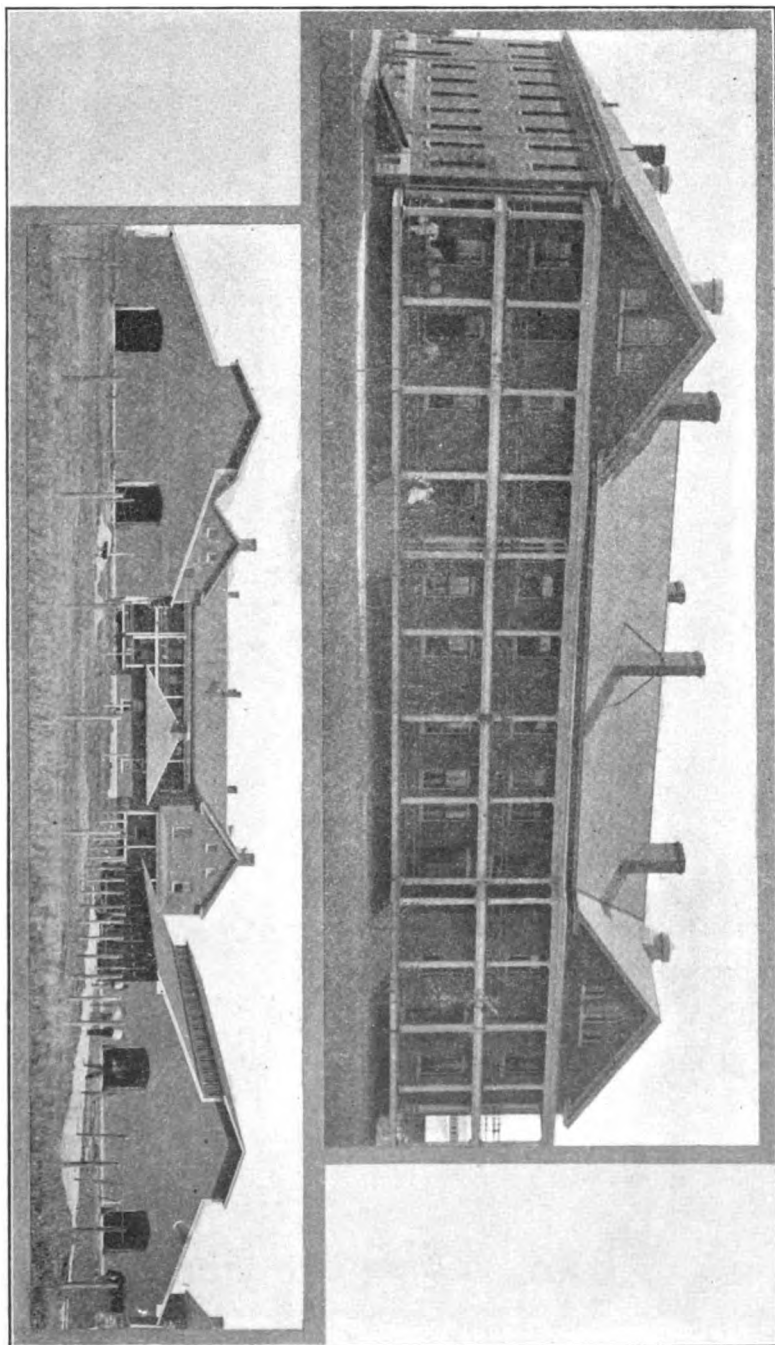
SOME OF FORT DES MOINES' BUILDINGS.

would be able to secure a military post for his State, and its location upon a site near the capital of the State. He took hold of this work with the zeal and enthusiasm which has ever characterized his entire congressional career. As chairman of the committee he had prestige and power to give the enterprise just the help and direction it needed.

The first bill was introduced in the Fifty-fourth Congress, but without success. It was again introduced by him in the Fifty-fifth Congress, when failure was again written upon the measure at the close of the session. In the Fifty-sixth Congress, however, the bill was enacted into law and the post near Des Moines became a certainty. The site was presented by the citizens of Des Moines, who contributed \$35,000 for the purpose.

While Mr. Hull's efforts were ably seconded by the best people of his State, there was nevertheless, a strong element in Des Moines opposed to the building of a military post near that city. This opposition was due, it is alleged, to fear that the soldiers would be sent there for the purpose of interfering in an unwarranted manner in business affairs. It was very difficult to convince many of Mr. Hull's constituents that the United States soldier was not subject to local civil authorities, and could only be called upon to preserve the peace when all the State authorities were powerless and when the Governor of the State made formal requisition on the President of the United States for aid, or when interstate commerce was interfered with in an unwarrantable manner. Mr. Hull pointed out to his people that when either of these conditions should exist, no matter whether the troops were located there or not, they would, if called upon, be sent from wherever they were stationed; so that the location would make no difference with this view of the case.

On November 13, 1903, the post was dedicated with appropriate military and civic ceremonies. The Governor of the State, Major General John C. Bates, United States Army, Hon. J. A. T. Hull, and many other distinguished Iowans, lent their presence to the occasion, making the event a memorable one in the history of the State.



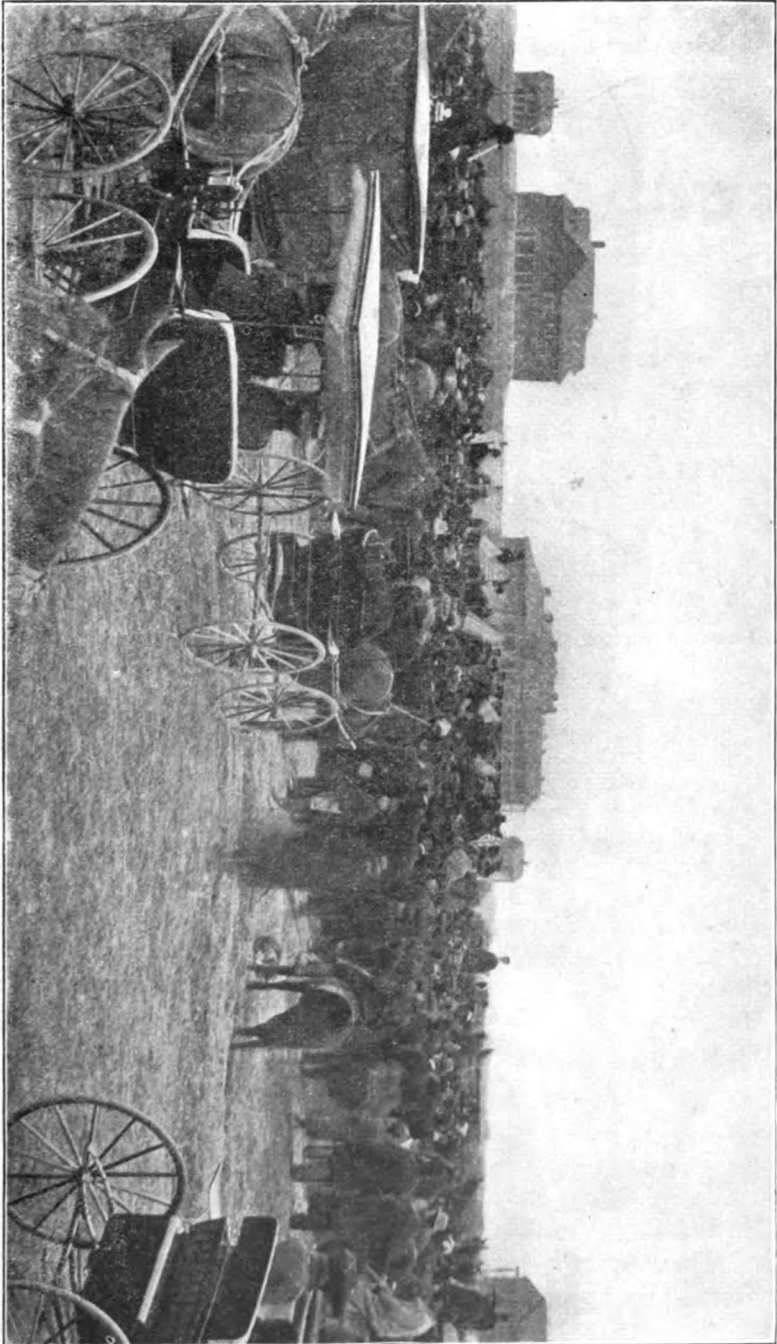
BARRACK FOR TWO TROOPS. BEAR COVERED BY TROOP STANDARDS.

The post reservation is within the city limits of Des Moines, an extension made necessary after the post's location, in order to permit the Des Moines City Water Company to extend its mains to the post, which has been done.

The Des Moines reservation comprises 400 acres. An additional 525 acres of land have been secured for a rifle range, three miles to the south of the post. The State of Iowa, for the purpose of providing sufficient ground for the annual encampment of its National Guard, has purchased 160 acres of land adjoining the United States reserve immediately to the north, and authorized the War Department to use this State land for its military operations whenever desirable. This enhances the value of the Fort Des Moines reservation, and gives its cavalry all the territory needed for ordinary movements.

All of the buildings, officers' quarters, barracks and administration building are about the main parade. The reader can form an estimate of its size from the statement that the commanding officer's quarters are just one-half mile due west from the administration building, while the distance across, from the barracks to the officers' line, is nearly a quarter of a mile. The main entrance to the post is from the north and west. The entrance from the north is midway from the troop officers' quarters, forming the north line of the parade. The west entrance admits into the main post between the quarters of field officers, grouped in a semi-circle. East of the parade is the administration building with guard house and post exchange to the left, and chapel still to be erected to right. In rear of this row of buildings are the quarters of the noncommissioned staff officers. The hospital is at the southeast, back of all quarters, and very prettily situated. The riding hall, not yet constructed, will be on the northeast corner of the post. A set of bachelors' quarters is about being finished. This building forms the east end of the officers' row and is a very substantial as well as commodious building. Another such building is to be constructed on the west end of the row.

In the arrangement of the barracks and stables for the twelve troops, Fort Des Moines has undoubtedly much the



DEDICATION CEREMONY AT FORT DES MOINES, NOVEMBER, 1868. HON. J. A. T. HILL, GOV. CUMMINGS, OF IOWA, AND MAJOR GENERAL JOHN G. BATES, U. S. ARMY, THE PRINCIPAL SPEAKERS.

best of it when convenience is considered. Each barrack building provides accommodations for two troops. The stables are built by pairs. That is, each stable is directly to the rear of its troop, a distance not to exceed 200 feet, while between these stables is the guard room building providing comfortable accommodations for the stable guard of each troop.

All the supply houses and shops of the post are in the rear of the troop stables. All stores for the post as well as material are unloaded directly from the cars. These are transferred to the electric line at Des Moines and hauled to the post. This is an excellent feature. It reduces the cost of hauling, besides a saving of time, to a minimum. The shops of the post are also along this line and conveniently located.

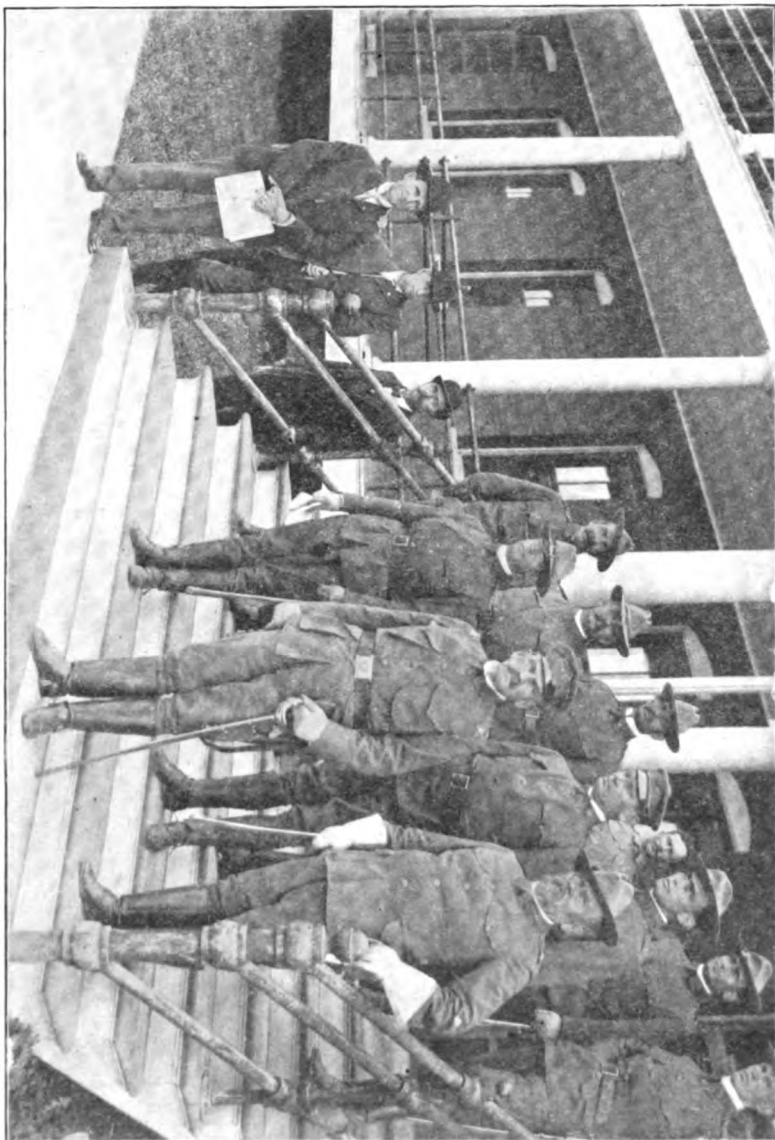
The construction of the post was assigned to Major Ruben B. Turner, Eighth Infantry, who was quite recently relieved of this charge by Captain Letcher Hardeman, Quartermaster Eleventh Cavalry.

Fort Des Moines' present garrison consists of the headquarters, field, staff and band and the second squadron of the Eleventh Cavalry. Another squadron will be ordered there as soon as the buildings now under construction, are completed. This is expected to take place late in the fall.

Since his arrival at the post last spring, Colonel Thomas has done much with the limited means at his command to beautify the post. Hundreds of fine shade trees have been set out and are growing. The parade has been sown to blue grass and all the lawns have been sodded. The post at the time the writer made a visit to it in August, presented a very pretty appearance.

The following is a list of buildings for the two squadrons:

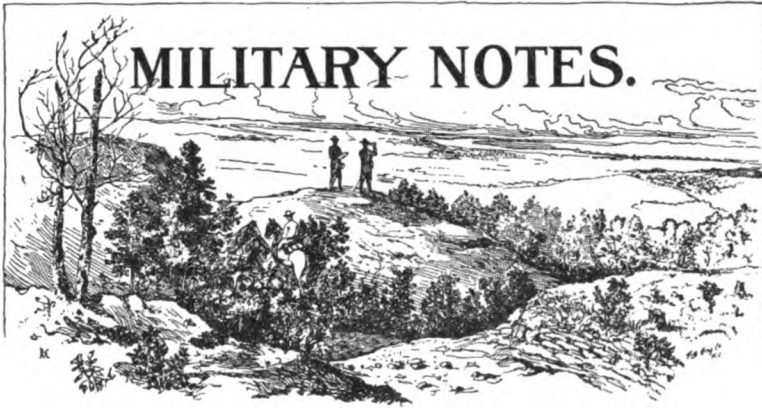
- One commanding officer's quarters.
- Two field officers' quarters.
- Four double sets of captains' quarters.
- Three double sets of lieutenants' quarters.
- One bachelor officers' quarters (ten officers).
- Four double sets of noncommissioned officers' quarters.



GROUP OF DES MOINES OFFICERS, WITH LIEUTENANT-GENERAL CHAFFEE IN CENTER.

Upon the completion of a recent inspection by the Lieutenant-General of the Army, he permitted himself to be photographed with the Eleventh Cavalry officers serving at the Post. Colonel E. D. THOMAS, commanding the Post, stands to his left.

- One hospital steward's quarters.
- One hospital.
- Four double sets of cavalry barracks.
- One band barracks.
- Eight cavalry stables, ninety horses each.
- Four double sets of stable guardhouses.
- Two blacksmith shops.
- One quartermaster's stable, thirty animals.
- One hay shed.
- One coal shed.
- One granary.
- One quartermaster and commissary storehouse.
- One bakery.
- One magazine.
- One oil house.
- Administration building.
- One guardhouse.



USE OF CARBINE SIGHTS.

BY CAPTAIN H. H. PATTISON, THIRD CAVALRY.

THE following method of teaching recruits the theory and use of the sights of the carbine is given in order that it may help some officers to convey to their men a practical knowledge of sighting before they begin actual firing. It is not intended to take the place of the drills and instructions prescribed in the Firing Regulations for Small Arms, but as an addition to them.

It has always been difficult to fix in the minds of men the difference between "fine," "half" and "full" sights, and it has been especially hard to give them a correct understanding of the half sight. To show these more clearly I had my troop blacksmith take a piece of iron water pipe, about six feet long and about two inches in diameter, and fasten near one end a piece of iron about one and one-half inches long for a front sight. About eighteen inches from the other end, and on the same side of the pipe, was fixed by a screw an L-shaped piece of iron, with a wide and deep notch in the upright part. To carry out the likeness a rough stock was fastened to the barrel. The magnification of the sights and

their parts makes it much easier to show the different kinds of sights, and by laying a coin on top of the rear sight the "half sight" is shown more clearly than is possible with the smaller parts of the regular sights.

To show the effects of moving the rear sight to the right, left, up and down, and the effects of different sights, the barrel is fastened by a rope or clamp near the muzzle to an immovable object, the stock being supported by a pair of hinged legs, one of which is bound to the stock. With the rear sight set straight and the front sight vertical, the gun is aimed at a fixed bull's eye, the legs being moved until an accurate sight is obtained. A movable bull's eye is then moved into line with two pairs of cross-hairs so fixed in the bore that their intersections are at the center. The two bull's-eyes show where the lines of sight and fire strike the target, and can be made to coincide by an adjustment of the relative heights of the sights and the distance to the target. The rear sight is then moved to one side, the gun sighted as before at the fixed bull's-eye, and the movable bull's-eye then moved into the line of fire. The movable bull's-eye will be found to have followed the movement of the rear sight, and the men can see graphically the result of changes. In the same way can be shown the effects of raising or lowering the rear sight, of canting the piece, and of sighting along the side of the notch of the rear sight.

In conducting the sighting drills prescribed in the Firing Regulations for Small Arms, it has always led to confusion in the minds of the men if they were told the exact errors they made, because the results with the gun placed on a sandbag and aimed at a movable bull's-eye are exactly the reverse of those in actual firing; so in these exercises they are simply told that they have not taken a uniform amount of front sight or that they have not sighted through the middle of the notch according to their errors, and the large gun is used to show the effect of the different mistakes.

In case the large gun cannot be constructed, the same results may be obtained by removing the bolt from the carbine and fastening it near the muzzle to an immovable object, supporting the butt with a pair of hinged cross-legs, the

essential point being that the gun be moved about the muzzle as a center and not about the butt when changed from one sight to another.

NECESSITY FOR A POCKET RANGE FINDER.

BY MAJOR W. C. BROWN, FIRST CAVALRY.

IN literally camping for the past six months with the United States Magazine Rifle, Model 1903, at the experimental range near Fort Clark, Texas, firing many thousands of rounds of ammunition from a firing stand with a muzzle rest to secure exterior ballistic data of the new arm, the writer has become impressed with the fact that while in the adoption of this rifle, fire can be made effective at considerably greater ranges than heretofore, and this efficiency will doubtless be increased by the use of a telescopic sight by sharpshooters and expert riflemen, we shall fail to profit by its superiority unless means are found for readily estimating ranges.

It is thought that we lose many of the advantages of an accurate long range rifle from the inability of officers and enlisted men, even those best qualified in this direction, uniformly to estimate distances correctly. The accuracy of the United States Magazine Rifle, Model 1903, is far ahead of our capabilities in judging distances. A man who will make remarkably close estimates under favorable conditions of weather, may fail, and in doing so mislead all those who depend upon him, when conditions are unfavorable.

If a small portable range finder were supplied to each company it would enable officers and noncommissioned officers to secure correct estimates of the range in all sorts of weather, and within very narrow limits.

The experiences of our army before Santiago in 1898 afford ample illustrations of the desirability of having pocket range finders in the hands of company officers, not only in

determining distances from our own positions to the enemy's trenches, but also for the use of officers on reconnaissance duty.

Where a range finder is most needed, is in estimating distances between 1,000 and 2,000 yards. Our firing regulations, pages 61 to 65, provide for instruction in this exercise up to 1,000 yards; moreover the flat trajectory of the new rifle renders very great accuracy in the estimation of distances at the shorter ranges less necessary than heretofore. Even if estimating distances up to include 2,000 yards, constituted a part of the regular course of instruction, there is little hope of our officers and men becoming sufficiently proficient in this exercise in distances over 1,000 yards to keep pace with the accuracy of the rifle, which holds the cluster of bullets reasonably close together even to 2,000 yards. The dangerous space at the longer ranges diminishes so rapidly as the range increases, that the latter must be known within very narrow limits, such as are only attained by means of a range finder, to place the cluster of bullets where it will be most effective.

Between 1,000 and 2,000 yards the maximum continuous danger space with the new rifle is, for infantry, as follows:

Yards.	Maximum continuous danger space.
1,000.....	55.1 yards
1,100.....	45.8 yards
1,200.....	38.8 yards
1,300.....	33.0 yards
1,400.....	28.7 yards
1,500.....	25.1 yards
1,600.....	22.2 yards
1,700.....	19.5 yards
1,800.....	17.3 yards
1,900.....	15.4 yards
2,000.....	13.8 yards

The maximum continuous danger space for cavalry is about fifty per cent. greater.

In order that the range finder may perform its work satisfactorily the error in yards of the distances estimated should not be greater than the maximum continuous danger space for infantry in the range under consideration. An error of from five to two per cent. is therefore allowable from 1,000 to 1,400 yards; from 1,500 yards to one mile, one per cent.; 1,800

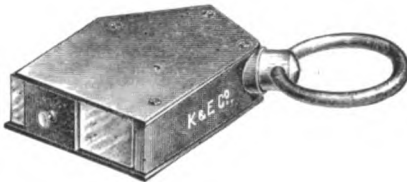
and 1,900 yards, three-fourths of one per cent.; and at 2,000 yards five-eighths of one per cent.

In the above discussion we have, as a matter of course, taken no consideration of errors due to changes in light, mirage and temperature, which greatly enhance the difficulty of putting the cluster of bullets where it will cover the target. Against this, it may be said that if but a small proportion of the bullets fired reach the target, the fire may fairly be regarded as effective.

Between 1,000 and 2,000 yards the continuous danger space for infantry ranges from 55.1 yards to 13.8 yards. For cavalry it ranges from 78.9 yards to 19.6 yards.

Even those who are quite expert in this exercise cannot be expected, with the eye alone, to estimate distances uniformly in all sorts of weather within the limits above described, or even to approximate it. Some sort of a pocket range finder becomes a necessity if we are to utilize as far as possible the advantages of the new arm.

With a view to ascertaining what could be done to supply this want we have been experimenting with a Penta-Prism



range finder. The shape of this is as indicated by the cut; it is about one-half inch in thickness, weighs less than two ounces, and can readily be carried in a watch

fob. It is very simple both in construction, and in its use, being a five-sided prism enclosed in a bronze case, only two faces exposed, strong, and with proper handling should last indefinitely, there being no parts liable to get out of order or adjustment.

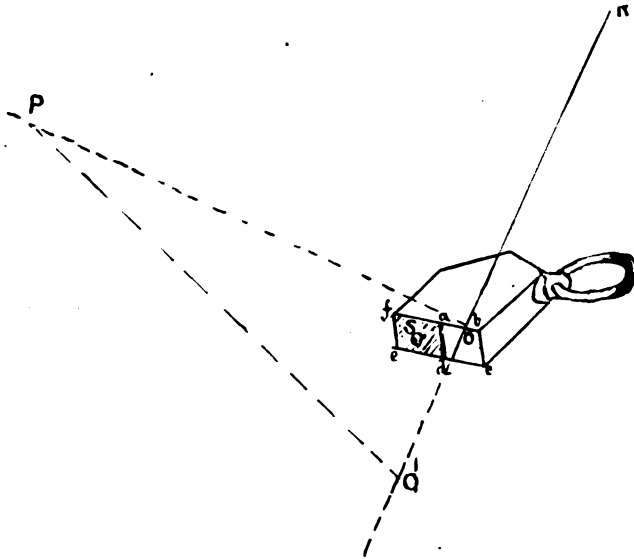
Its use is easily learned by fairly intelligent enlisted men in from fifteen to thirty minutes.

At the experimental range half a dozen of our noncommissioned officers were able to estimate distances at the first or second trial with an average error of only about three per cent., and this, too, under conditions which were not particularly favorable. Three of the estimates of the distances, ranging from 1,400 to 1,500 yards, were made with errors of three,

eight and one-third and thirteen yards; two distances aggregating four miles were estimated with an error of but three per cent.

It is believed that with a little practice those men in a company who have an aptitude for such work will get distances with an error of less than two per cent.

To determine a range with the Penta-Prism range finder the observer, holding the instrument horizontally a few inches in front of the eye and facing at right angles to the



line to the object P, whose distance is wanted, endeavors by moving about to see by reflection in the prism the object P, and by direct vision immediately above or below it some sharply defined and distant object R. All this looking into the right face a, b, c, d, the slide S is now moved so as to cover a, b, c, d, and permit the observer to look into the face a, d, e, f. The point on the ground immediately underneath O at the taking of the first observation is marked by an assistant holding a staff in a vertical position. The assistant may be dispensed with by simply driving the staff in the ground in a vertical position at this point.

The observer now steps backward to what he roughly

estimates to be one-fiftieth of the distance OP, keeping on the line OR, prolonged. The slide S, having been moved to the right to cover the face a, b, c, d, an observation similar to the first is now made through the face a, d, e, f, the observer posting himself accurately on the line OR, prolonged and finding by moving forward or backward along this line a point where P (by reflection) and R by direct vision immediately over or under the instrument are again apparently in a vertical line. The distance $ÓÓ$ is now measured and multiplied by fifty, giving the distance OP. Any tape line or other measure may be used in measuring the base line, but for military purposes it is a convenience to have a tape divided into yards and hundredths of a yard. The observer then, to multiply the length of his base line by fifty, simply drops the decimal point and divides by two, getting a result expressed in yards.

The writer is aware that there are other (possibly better) range finders than that above described, but he has not been so fortunate as to find them. With the adoption and issue of the new rifle the time seems opportune for finding out which *is* the best and most practical portable range finder and having a limited number in the hands of troops for trial and report.

ORGANIZATION FOR MILITARY TELEGRAPHING
IN THE FIELD.

BY LOUIS ZERLIN.

TRANSLATED FROM THE "ARMÉE ET MARINE" FEBRUARY 14, 1904, BY X. Y. Z.

THE extremely important rôle that telegraph lines and railroads will play in the next war is not taken into consideration by many people. It might be, therefore, interesting to examine the recent organization of the telegraph service in the army.

A summary review of the general history of the subject, not considering visual signaling, by means of which a message may be transmitted from one end of France to the other in less than one-half hour, is as follows:

The first application of telegraphing in the field was made use of during the Crimean War, a telegraph line being built from Bucharest to Varna. Afterwards a submarine cable was laid under the Black Sea, across Austria and connecting the headquarters of operations with the headquarters of the army in France.

During the Kabylie expedition in 1857 the general headquarters of the expedition was kept in constant communication with the base of operations by means of a wire strung on trees or buried. The same method was pursued in 1859 when for the first time the corps of the army was able to communicate with the home headquarters of the army, although the service was not entirely without interruption.

Up to this date the service was performed under the direction of civilians. It was not until the War of Secession (1861-5) that a strictly military signal corps was first organized.

Prussia, during the wars of Denmark and Austria, followed the same example, organized and put into effect a signal corps as a branch of the army.

Following these wars all the great powers organized a special permanent military signal corps, nearly all of them placing the new corps under the jurisdiction of the engineers.

France, however, in 1870 organized one complete company, but placed it under civilian administration. After the War of 1870 France organized a Signal Corps, but the personnel was furnished by the administration of posts and telegraphs, furnishing a telegraph service for the army (first and second line and parks) and the service for the territories. The law of July 24, 1900, organized this service upon an entirely new basis. It created a battalion of telegraph operators consisting of six companies (Mont Valerien). The duties for this service were finally regulated by the Provisional Instruction of August 4, 1902, and the decree of January 3, 1903, and was made a part of the organization of the army, its object being that the head of the army may be placed in communication with (1) army headquarters, (2) the wings of the army, (3) security service, (4) the rear of the army, and (5) the corps commander.

The chief of staff issues the necessary instructions for the government and duties of the telegraph system of the army, the supreme authority and supervision of this service being vested in him.

The telegraph service of the army embraces a first line installed and operated in each army corps by a company of telegraph operators; a second line installed and operated by the technical sections. The limit between these two sections is fixed by the commanding officer of the army. The first line establishes and maintains, as far in advance as possible and in the direction of the line of advance, one or more telegraph stations designated as "centers of information," in order that all the information collected by the cavalry scouts, or by other means, can be forwarded by telegraph. This line should connect with the various places designated by the commanding officer for the best interests of each day. The principal of these places being the station of the general headquarters of the army, the center of this line. The superintendent of this line is a field officer of engineers whose station is near at hand to the chief of staff. He makes the necessary details for the selection and installing of the line from the companies of telegraph operators, dividing them into six sections, each accompanied by their supply

trains, and also for the engineers' telegraph detachment. To-day this detachment is the main source of supply for this service.

The section that can be economically divided into two working parties is used as the main erecting party. They are equipped with a small supply of tools and material for the use of repairs of already existing lines which may have been destroyed by the enemy, or for the construction of new lines. These repairs and new work are to be made by means of a field cable, a properly insulated wire.

The main supply train for these companies carries, in addition to other material, more than 200 kilometers of wire.

The superintendent details for each section the necessary number of wagons.

Each section has six especially constructed wagons as follows:

1st. A telegraph wagon, a telegraph office on wheels, equipped with the necessary apparatus for the simultaneous transmittal and receipt of messages from four different directions.

2d. Two work wagons, containing all the material necessary for installation and repairs.

3d. Two light wagons, constructed for the rapid conveyance of men and material necessary for the installation of an office. These five wagons are sufficient for the transportation of the personnel of a section and permit rapid movements for important trips. A study is now being made for substituting traction engines in the place of horses.

4th. The last is a reel wagon of two wheels which allows the work to be carried on in narrow roads or across country.

In addition to the above each section is supplied with four army bicycles, which carry a telephone, a hook pole, a field pole and 500 meters of light wire. These machines are particularly convenient for testing lines.

The companies, being organized as above stated, are in a condition to operate with great rapidity. Three kilometers per hour may be built by stringing the lines on trees or by other temporary means. If necessary the construction can

be carried on with sufficient rapidity to keep up with the march of the column by simply laying the wire on the ground, and, if necessary, raising it only over road crossings or other obstacles. The speed may be further increased by starting the line at two different points, or from several different sections.

In order that the material may be economized, each day as early as possible, upon the arrival at the end of the day's march, communications are established between the general headquarters or certain points of the army's line with all army corps' headquarters or centers of information. The old stations are then disconnected and the instruments and material are turned over to be used on the second line. By this method communication is cut off and put in service again each marching day. In certain cases, for example, upon the approach of the enemy, it is necessary that the means of communication be uninterrupted. Each army corps of the first line carries with it a section which operates, for example, between the advance guard and the head of the column, laying the wire without interruption during the march, and establishing from place to place temporary stations.

The details of the technical sections of the second line are responsible for the making of connections between the main headquarters and the base of supplies, and attend to all lines in the rear and in the territory.

The technical sections follow immediately the army, relieving, in all the stations, the personnel of the first line. If so desired, the temporary lines are taken up and sent to the front and are replaced by permanent lines.

In addition to the above organization, each cavalry brigade has a light wagon, containing material and four telegraphers for each regiment. They are used in repairing lines and laying the short sections necessary for communication with the centers of information established by the army.

If the distances are too great or the neighborhood not safe, the cavalry places itself in communication with headquarters by various means, such as automobile bicycles, horses, signaling, or even carrier pigeons.

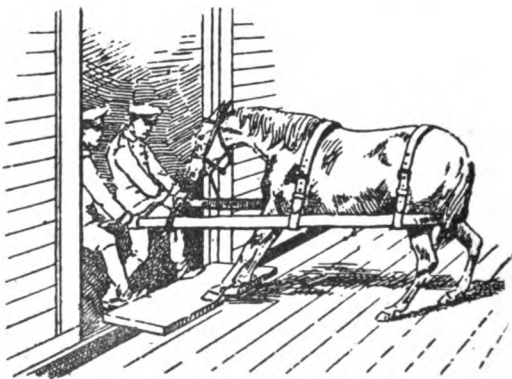
METHOD OF EMBARKING OR ENTRAINING HORSES.

TRANSLATED BY COLONEL A. H. B. PHILLPOTTS, R. H. A.

[From "*Journal Royal Service Institution.*"]

DESCRIPTION of a method suggested by Captain Bakevitch of the Russian army for embarking or entraining horses that are difficult to get into the ship or train :

The apparatus consists of a strong breeching made of webbing, which passes around the animal's quarters and is supported by two straps passing, one over the withers and one over the croup. The ends of the breeching are continued to the front so that two or four men can haul onto them and so force the horse into the box or through the opening in the ship's side. There are two rings on the front part of the breeching to which the head rope or reins can be fixed to keep the horse's head down.



The apparatus here described seems to be an improvement on the ordinary rope, as it cannot slip down, does not cut the horse, and by its use the horse can be guided into the box, etc.

The attached sketch describes the gear.

COPY OF A LETTER FROM THE RUSSIAN GENERAL SKOBELEFF TO HIS FRIEND, GENERAL STROUKOFF, WRITTEN AT THE CLOSE OF THE RUSSO-TURKISH WAR.

TRANSLATED FROM THE FRENCH,
BY CAPTAIN C. D. RHODES, GENERAL STAFF.

THE following interesting letter from General Skobelev to his friend, General Stroukoff, has recently come to light in Russia, and has been forwarded to the General Staff by the United States military attaché at St. Petersburg. It was written at the close of the Russo-Turkish War from the Russian bivouac near Karamanli, and is of interest on account of the writer's decided opinions as to the shortcomings of the Russian cavalry, and the true role of cavalry in wars of the future.

General Michel Skobelev, one of Russia's greatest generals and a most remarkable man of his time, was born in 1844. His military career was almost entirely self-made, a difficult undertaking in a country where birth counts for so much. He served with distinction in the expedition against Khiva in 1874, and against Khokand in 1875, and was conspicuous for personal gallantry as well as for military ability of a high order. He was refused a command at the outbreak of the Russo-Turkish War, but entered upon the campaign as a volunteer, and crossed the Danube carrying a rifle on his shoulder. But his genius could not long remain hidden, and he quickly rose to high rank. As a general officer before Plevna he did brilliant work, and has been compared to Napoleon in being able to rouse his soldiers to the highest degree of enthusiasm. At the taking of Adrianople, he was for pushing on to Constantinople, and submitted plans for a further campaign; but his advice was not followed by the Russian government, much to his disappointment and regret.

After the Russo-Turkish War, Skobelev was made commander in chief of the Geok-Tepe expedition, and conquered the Tekke-Turkomans in 1881.

He died at Moscow on the 7th of July, 1882.

TRANSLATOR.

“My Dear Alexander Petrovitch:

“I thank you a thousand times for your good letter, coming straight from the heart. It has not astonished me, but has deeply pleased me, coming from one who, since the last war, I have been accustomed to consider as my devoted friend; from Parapane to Tchataldje and in that brilliant military future of which I personally, for the good of our poor cavalry, was at one time blind.

“I have said ‘our poor cavalry’ with a feeling of profound respect and love for the material of our regular cavalry. It is you who have awakened in me this sentiment by proving to me with the never to be forgotten regiments of the First Cavalry Division what can be accomplished with Russian regular cavalry. But everything requires a leader, and it is indeed a fact that I have seen few leaders during this last war. Believe me, my dear Alexander Petrovitch, that the question of the immediate creation of good leaders for cavalry fighting is more urgent for the Russian army than any other. What would have become of us in Turkey the past summer if the cavalry of Sultan Mahmud were resuscitated? In a war with Austria, or even with England, the lack of knowledge of the employment of cavalry might truly cause the loss of the campaign. In our day more than in the time of Zeidlitz and of Murat, the rôle of the cavalry is entirely that of *offensive élan*. It is precisely for this end that the carbine has been furnished, and not that the cavalry may modestly fight dismounted within sight of its infantry, as has happened only too often.

“In keeping itself as much as possible in touch with the main body of the enemy, good cavalry indefatigably seeks opportunity for turning one of the active flanks of the hostile

army, or even of the rear guard, and for giving it a decisive check, at the same time permitting it the least possible knowledge of its own plans. Nowhere is experience so valuable as in the cavalry.

“At the beginning of the present century they called the cavalry *the arm of surprises and flanking movements*. What is to be said of it now? As a matter of fact our cavalry ought to be prepared to play a very important rôle in a European war, if such takes place. It should by its qualities forcibly influence the strategical and tactical decisions of the commander in chief. I may even say that it should influence the *logique of the entire campaign*.

“The generals who will be called upon to direct the movements of the cavalry, ought, in addition to having an intimate knowledge of military science in its entirety, to have *the military eye*, and the faculty of drawing conclusions in any situation and under any condition. They should be endowed with limitless activity, and more especially should possess the character, the gift of instant decision as to the assumption of responsibility. These are exceptional qualities and—shall I say it—are neither the qualities of the riding hall nor of the reviewing stand. That is why the army should cherish those who answer to the ideal that I have just described; those who have performed legendary exploits in the heart of a rigorous winter, a hundred *versts* distant from their infantry, during those famous days when there hung in the balance the honor of the standards entrusted to them, the lives of hundreds of heroes, and finally the irrevocable risk of losing or maintaining their own military reputations. Envy alone can obscure the reputations of such men.

“Receive my sincere congratulations on the occasion of the gift which the Emperor has bestowed upon you—a sword set with diamonds. It will be for you an agreeable souvenir and as for me, I see in it a proof that His Majesty understands and appreciates you. Give me news of yourself in detail, and of many things in general. I have already turned over the command of my corps to General Verefkine; everything is in order. You know that I love the service,

and that I do not permit myself to have pretensions. I execute orders, that is all.

"I clasp you cordially by the hand.

"Your devoted,

MICHEL SKOBELEFF.

"Bivouac near Karamanli, Ss. V. 1878."

THE UNITED STATES CAVALRY HORSE.

BY WILLIAM P. HILL, VETERINARIAN TWELFTH CAVALRY.

I THINK all cavalry officers will agree with me when I say, "The American horse furnished to the United States cavalry is underbred and in no way a typical cavalry horse, and not to be compared to the German and English mounts."

The price paid is far too small to obtain anything like a fine animal; \$120 the average amount, buys exactly the horse we now get; he is perhaps sound in wind and limb, but style and good conformation he seldom has. How often you can walk down the picket line of a troop and pick out perhaps a dozen that would look better hitched to a wagon; heavy-boned, big headed, sharp hipped, coarse bred plugs. This is not a reflection on the buyer, but on the small price the buyer is limited to.

The horse required for really efficient cavalry service cannot be bought under \$200. He brings this price at five years old readily in the open market. We cannot expect to buy good cavalry horses in States where perhaps there is not a single fine saddle stallion. The trotting horse has come so much to the fore lately that his get for saddle purposes is useless, and where crossed on an ordinary farm mare, we get a straight necked, sloping hipped, nondescript. This mixture of blood produces all kinds of different traits in the colts. Some with bad feet, misshapen, brittle or too soft, bad

tempers, bolters, or the reverse animals that are slouchy and dull—sway back, too high at the withers and all the ill results of haphazard breeding.

My idea of a cavalry horse is what in fox hunting circles is called the "weight carrying hunter." He has plenty of size combined with thoroughbred blood. He is up to heavy weights with strong hind quarters, yet full of nerve and energy, carrying a heavy weight across country, mostly at a gallop, for hours.

This animal, of course, would be hard to get for our cavalry unless we had government farms for the purpose, but if the government would buy about fifty large thoroughbred stallions and place them through the different horse breeding States and take options on the colts until fit for cavalry breaking, this would surely be a big step in the improvement of our cavalry horse, and in course of time have a very visible effect on the general and individual appearance of our horses.

THE NEW BRITISH CAVALRY SABER.

TRANSLATED FROM "LA FRANCE MILITAIRE,"

BY CAPTAIN C. D. RHODES, GENERAL STAFF, UNITED STATES ARMY.

THE technical cavalry commission presided over by Sir John French, has just adopted after a long series of comparative studies a new saber, absolutely straight, intended to replace the curved saber, almost universally used up to the present time by all cavalry troops.

This radical change has been recognized as imperative by the British military authorities, in the light of the experiences of the war in the Transvaal; and in addition, is in keeping with the important modifications brought about during recent years in infantry tactics.

The new arm, much lighter than that which is still in use on the other side of the Channel, weighs only 945 grammes. Its length, not including the point, is exactly eighty seven and one-half centimeters. The blade, which measures almost two centimeters in width, terminates in a very long sharp point (375 millimeters).

Three regiments of cavalry have recently been provided with this saber, and will make some trials of it on the maneuver grounds of Aldershot and Curragh.





THE BRITISH CAVALRY AND THE LESSONS OF
1899 TO 1902.

By "A COLONIAL."

[From the *United Service Magazine*, July, 1904.]

HAVING served in Irregular Corps throughout the late war, brigaded on several occasions with regular cavalry, I did not fail to notice, like many others, their shortcomings, especially in the early stages, whilst, of course, admiring their many good qualities. Their weak points may be roughly enumerated as follows:

1. Indifferent knowledge of scouting.
2. Studied dislike to acting on foot with the rifle.
3. Lack of being able to utilize ground for taking cover, or concealing their movements.
4. Bad quality of their mounts.
5. Excessive weight carried by the horse.
6. Bad shooting.
7. Want of individuality, thus preventing men from making use of their own heads.

Many of these weaknesses were soon rectified, and some regiments, commanded by large-minded men, learnt by bitter experience to be nearly as good as their enemy.

Few cavalry officers, I feel sure, will disagree with me over these points, so I hope, therefore, to give as briefly as possible my personal observations during the past nine months as to what steps are being taken to improve matters. Last summer, some fourteen months after peace, I rode down

from Johannesburg to have a look at the cavalry concentrated at Klip River Camp for drills. My arrival was a bit early for them, so saw men and horses in the lines. From a spectator's point of view, things looked very pretty, with whitewashed stones marking the roads and the boundaries of regimental camps; but from a campaigner's point of view from the small space allotted to regiments, and the way horses and men were crowded together, it appeared as if there was still a doubt whether the country was ours. I heard later it had been laid out by an infantry officer. On learning that the cavalry were shortly starting out for work, I off-saddled for a small feed. Soon the regiments, all of which had taken part in the war, filed past me on their way to a plain east of the railway and west of the Zuikerboosch Rand.

I overtook them later, and found them crowded together in what was called "preparatory formation." I watched a small squadron gallop to the front, and hoped to see how the scouting was carried out, but they never opened! I afterwards found it was the General and his staff.

Soon the mass began to trot, and after going about one and a half miles, I saw three lines of flags coming towards them. The Royal Horse Artillery came into action, and then there was a wonderful advance at a gallop, ending in a charge over ant-heaps and ant-bear holes into the flagged people. I remarked to a non-commissioned officer near that this flagged enemy did not attempt to maneuver to outflank the cavalry, and he replied, "Of course not, the General commands them also," and woe betide them if they don't carry out his orders to the letter of the law.

I rode away in disgust; I had seen enough; but knowing their General had not distinguished himself as a cavalry leader in the war, but as a town commandant, I was not surprised; all generals of distinction having gone home to occupy fat billets.

I saw later in the papers that the local Boers had been entertained at luncheon, and that they had expressed their pleasure at all they had seen. No wonder! for how they must have grinned from behind their kopjes at the easier task which the future seemed to have in store for them.

This spring I came to England, partly on business and partly on pleasure bound. Soon after my arrival in London I met several cavalry officers whom I had met during the war, and I was surprised to learn from them "that if a squadron leader wished to get on now, spit and polish, knee-to-knee close drill, and a studious avoidance of useful dismounted work, was the way to do it. On the other hand, if he studied individuality, Boer tactics, mounted or dismounted, concealed outposts, common-sense ideas in combination with sufficient close cavalry drill, he was at once classed as a — mounted infantryman, and thus a marked man."

I further gathered that the cavalry was divided into two schools, the one, those who totally disregarded the lessons of the war and were anxious to return as quickly as possible to what obtained in '99; the other were what might be termed progressive, viz: those who wish to see the cavalry the handy man of the army, a good shot, a good scout, a good horseman, capable of beating a mounted infantryman on a horse, and yet being able to act on his feet equally as well, but fully recognizing that in addition to these things, cavalry must be able to gallop and drill in close formation, and charge home with a sword when opportunity offers.

I decided to pay an early visit to Aldershot, the seat of all learning, where most of the generals who escaped the heavy sword of Stellenbosch, either by luck or by the premature ending of the war, are congregated, to see for myself how the cavalry were being trained under their eagle eyes.

One fine morning I hired a local horse and rode out to what they call the Long Valley. Possibly it is a long valley as far as Aldershot is concerned, but not in accordance with South African views of one. I found it about half a mile long by half a mile wide. There is a good deal of useful ground southeast towards the town, but that apparently was kept for military police to ride about on, at least, judging by the fierce way they ordered me off. Well, on this drill ground proper I found cavalry, infantry, artillery, yeomanry officers, and men driving in boats on wagons, in fact the whole place was scattered over by people moving in every direction like a lot of ants. If I had taken up a position anywhere, I could not

have swung a cat without hitting a foot soldier, a horse or a gun. However, here I was in the midst of the cavalry, doing their short squadron training under the squadron leaders, supervised, no doubt, by many cocked hats. I saw one or two but I don't know who they were. I recognized at once my friend, the same old troop horse, made in England, that we saw so much of during the war, viz.: the heavy, big-footed, bad-shouldered, common brute, who died, at the thought of a long trek, and the long-backed, weedy misfit which the dealers sold at such handsome profits! Not the little short-legged horse the officers used to swear by for work in the war.

The men were still seated on the same old saddle, right away from their horses, instead of on the Colonial saddle we hoped we had converted them to (I believe the officers still use them). Slung to the saddle was the same old heavy sword with bright steel scabbard, which we saw bent and rusty in war. Some troops were tent-pegging and playing what looked like mounted hockey on their clumsy beasts, endeavoring, I presume, to make them as handy as polo ponies and as clever as hunters, as is now being quoted. I pity the man's neck who hunts or plays polo on one.

Some troops were trotting about doing close drill, and occasionally dismounting from their horses on the tops of the hills and falling in in front of them with their rifles, whilst others dismounted under cover, then walked up on to the skyline and leisurely lay down; but when the order to mount was given, they all stood up and ran back to their horses. All ideas of taking cover or concealing their movements seemed to be forgotten. I may remark that these men wore pipe-clayed rifle slings to make them more conspicuous. I ventured to remark to a nice-looking lad near me, as to whether they had not received the new short rifle I heard was being introduced. Fancy my astonishment when he replied: "Don't talk about rifles; we have not shot a course since peace."

I saw also other troops galloping about with swords drawn, charging space. The little scouting I saw consisted of men riding on the skylines, looking like Nelson on his monument.

As every one went home about 11 A. M., I returned to London a wiser and sadder man.

Having seen in the papers that his Majesty the King was visiting Aldershot to watch the field training of the Army Corps, and having heard with amazement that the cavalry were rehearsing their *rôle*, I decided to pay a second visit on that day to see what was considered up to date. I went out to the Long Valley, and was soon attracted towards several cavalry regiments and artillery, formed up in line behind a hill at the south end of the ground. Then suddenly, I presume, when his Majesty arrived, out went one regiment, due north, not preceded by scouts, and without flankers, down into the flat where some flags were advancing, and then charged and disappeared behind a hill west. Then, under the roar of the artillery in action, the rest of the regiments advanced in the same direction in a beautiful line, also without scouts, flankers, supports or reserves, much less rear guard, and leaving the guns without an escort. Fancy what an ignoramus any Colonial would have been considered had he forgotten one of these items in war. Well, this line swept forward, first at a trot, then a gallop, and finally charged the same flags at the same spot. When they had pulled up their horses, which took some time, they retired from both flanks, joined by the first regiment that went forth, back to behind the same hill I found them at, where they faced about and dressed on markers in one long line. I wondered what was going to happen — possibly a march past; but no, they were about to make another charge in line, the whole lot this time.

This system of dressing on markers before a charge is strange. I remember reading, as a boy, that it was done by the heavy cavalry at Balaklava. One of these regiments may have been there, and the old tradition is possibly adhered to by all out of compliment. Well, this long line moved forward and charged the flags at the same place as the preceding charges. I afterwards learnt that the King was seated in a tent overlooking this spot.

Cavalry charges, I always thought, were made like stone walls, knee to knee, and that this was so hard to do that the

cavalry was always practicing it ; but those I saw had a depth of 150 yards, wide intervals between men, and some of them may still be galloping, as far as I could see.

Had this display taken place at the Agricultural Hall, or at the Crystal Palace, one could have understood it; but having seen in the papers, both before and after, that his Majesty and the new Inspector of the Forces were witnessing the field training of the Army Corps, and that this was part of a tactical field day, I could not help thinking, "C'est magnifique mais ce n'est pas la guerre."

The cavalry then disappeared, I believe, to continue the field day; but when next I saw them, the battle being at its height, and the infantry attack being pushed home, they were lining the plain for the King's motor to pass through.

I dare say I have now opened your eyes as wide as mine as to how the cavalry have profited by the lessons of the war; and, in conclusion, may I, as a poor humble Colonial, with the best interests of old England at heart, offer them a little advice, which is: learn to scout, shoot, take cover, and conceal yourselves, and to fight in your own enclosed country before you assemble on Long Valleys or other plains to practice tomfoolery, if you don't want to spend another 200 millions to learn a second time your faults.

REPLY TO "A COLONIAL."

By "ONE OF THE OLD SCHOOL."

[From the *United Service Magazine*, August, 1904.]

I HAVE been a good deal amused by the article in your magazine, July number, entitled "The British Cavalry and the Lessons of 1899 to 1902," where "A Colonial" tries to teach his grandmother. If you can spare the space I should like to offer a few criticisms.

1. With regard to the seven weak points enumerated, every one knows that, as far as the Boer campaign is con-

cerned, they existed; our cavalry has never been and is not now being, trained to fight farmers, natives, or such like, but to meet continental armies, should ever our politicians bungle us into a war with them. With our strength, money and resources, we can always, at the last moment, adapt ourselves to anything, and learn our lessons as we did in South Africa, and on many other occasions. Our army of recent years has been "made in Germany," and is yearly kept up-to-date by able officers who attend German maneuvers. The latest reform is that excellent hat, erroneously called the "Brodrick hat," which was, I believe, the outcome of the visit of the Secretary of State for War, Commander-in-Chief, etc., after peace was declared.

2. "A Colonial" criticises the cavalry maneuvers at Klip River, conducted by a dashing cavalry officer, whom he sneers at as having commanded a town during the late war. Many cavalry generals and C. O.'s commanded towns and block-house lines, in order, I believe, to vary their experiences of war, to improve their training, and, lastly, to give the younger men a chance of leading columns and regiments. I feel quite sure that the gallant officer in question would have led charges in Natal with great *élan* had it not been for the dongas, kopjes and Boers.

3. The next allegation that our cavalry is divided into two schools, viz.: the progressives, as "A Colonial" styles them, *versus* those who adhere to the old traditions.

Thank goodness these new ideas are confined to squadron leaders and subalterns. Our cavalry generals and some C. O.'s still believe in the cavalry charge; they have no fear of the rifle, and I feel confident that they, especially the gallant G. O. C. Cavalry Brigade, Aldershot, would charge unbroken infantry with a *sang froid* as great as that which was, I hear, displayed by the latter officer when he encountered blank ammunition at close range in the recent cavalry reconnaissance.

4. "A Colonial" sneers at the short squadron training. He apparently does not know that in our army we begin at the top and work downwards in our training. The G. O. C. instructs the C. O., and the C. O. the squadron, and so on. We don't start at the bottom, as our squadron leaders lack expe-

rience, and, besides, the generals and C. O.'s would have nothing to do but inspect. We do not possess highly trained officers like the Germans.

5. "A Colonial" calls the troop horse "big-footed, heavy," etc. I feel sure most senior officers like a big horse, so long as he is fat. What idiots we should look on ceremonial parades in full dress, mounted on the small horses he suggests! Again, the big-headed horses are invaluable in a charge, as their heads act as battering-rams against the smaller ones of the better bred class.

6. *The Saddle.*—The present pattern is used almost universally in continental armies; and I should like to know how we could have carried all the kit we did in South Africa without it. The front arch must necessarily be high to give the bad riders, of whom we have many, something to hold on to when a horse travels at speed; and, secondly, it must have a high cantle to enable men to mount easily and carry a lot of kit.

7. *The Sword.*—"A Colonial" laughs at the glittering scabbard. Of course he does not know that we colored them khaki when we went to South Africa. In peace it must glitter, and we must have noticeable things like pipe-clayed bandoliers, etc., or else it would take opposing cavalry a long time to find us. In like manner, artillery uses black powder to mark the position, or else no one would know where they were.

8. *Taking Cover and Concealing Movements.*—Of course we train our people to have contempt for cover and bullets; how else could we persuade them in war to face the rifle at a gallop? Why, they would all want to go to ground behind rocks and kopjes!

9. The cavalry display before the King appears to have displeased "A Colonial," who forgets that ours is a voluntary army and generally plays at soldiering, and that unless we have these shows we cannot get recruits. Who knows how many would-be fathers, or young lads, witnessed those charges?

10. Lastly, "A Colonial" shows complete ignorance when he criticises cavalry maneuvering without scouts, flankers

or rear-guard. Our cavalry never have such things when in brigade or large bodies—with the object, I always learnt, of inducing the enemy or opposing force to come boldly up and surprise them. Every cavalry officer of standing knows that from General Luck downwards, all inspecting officers chiefly examine C. O.'s and squadron leaders in what they would do if suddenly attacked; and troops three-quarter right or left-about wheel was invented for the purpose. Another favorite question is: "If coming through a defile in sections and suddenly attacked, how would you form to repel it?"*

Again, reconnaissance schemes are only carried out to practice officers in writing reports, and to see how quickly they can be transmitted to the G. O. C. No one cares how the scouting is done, nor has a chance of seeing.

To conclude, I would give "A Colonial" a little advice, viz.: take care when the next war comes, you have an imperial officer as your colonel, and don't officer your corps with all your relations, but select men of experience—for example, myself.

* There is but one other British examination question with which I am acquainted that can compare with the absurdity of this. My example is as follows: "Why do troops now advance to the attack in extended order instead of in quarter-columns?" A militia subaltern, in reply to this question, wrote: "Because if they were to advance in quarter-column it is probable that they would all be killed." It is a pity that this wise young officer was not also called upon to answer the question quoted by "One of the Old School;" he would probably have written: "It would depend upon whether the shortest way to more favorable ground was to the front or to the rear."—EDITOR U. S. M.

THE CAVALRY OF THE FUTURE.

TRANSLATED FROM THE "REVUE DE CAVALERIE,"

BY CAPTAIN J. W. HEARD, THIRD CAVALRY, FOR THE SECOND DIVISION
GENERAL STAFF UNITED STATES ARMY.

UNDER this pretentious title do not expect a description of a steel horse, swift as electricity, moving on thousands of unbreakable legs, and mounted by an ironbarbed automaton accurately spitting forth thousands of projectiles; neither expect a monstrous ballet, danced in echelon by a collection of phenomenal horsemen, and a divulging of the secret of victory discovered by a new geometrical formation.

The cavalry of to-morrow, I believe, will very much resemble that of to day and of yesterday. The horse, its distinctive feature, will probably have more blood, and will not be so heavily loaded. The man who rides him will be less of a military machine than at present; that is, he will be less molded into one shape, more thoughtful, more individual, more difficult to command, if it be desired to align him in a troop. He will know the value of his gun and how to use it; he will have a dart which will enable him, like a wasp, to free himself from difficulties near by, and finally he will be bound to his comrades by the sentiment of the command.

This is a very nebular psychological case which I will try to explain. Without pretending to read the soul or the human instinct like a book it can, I believe, be positively stated that the secret of future victory lies in the community of thought and in the moral tie which binds every individual energy and action towards the same aim. It is a new spirit with which we must become acquainted. The present arms are of such effect and precision that they produce, when well handled, unthought of results. But for this, they must be in hands of men of perfect individuality, cool and brave, as indicated by the word, a correct translation of the Latin word *Vir*—a man.

It is not by preparing figureheads or by killing the individuality, by exercises in confusing gatherings on the drill ground, that we can prepare horsemen to play their rôle in war, spending their energy and risking life for the common end.

This study will be divided into three parts :

Organization and armament of the cavalry.

Its instruction.

Its employment.

All of these are military problems. The use that we can make of a soldier depends upon his moral and physical qualities, upon his arms, and above all whether he knows how to use them, upon his equipment and his food supply ; or to sum up, in the moment of action upon his capacity of "can and will."

The regiment is the organization unit of cavalry. The cavalry brigades, divisions and corps, if we are afflicted with enlarged ideas, can be established at the moment of use. They exist with difficulty when assembled for any considerable length of time, and their employment in mass is rare.

The destruction of the French cavalry in 1812 was caused quite as much by its premature organization into corps at the beginning of the campaign and the consequent difficulty of its subsistence, as by everything it suffered during the war.

I shall stir up many contradictions. There are too many officers in a regiment of cavalry. A commandant, a second in command, five captains, three officers and an adjutant for each squadron, an instructor, a captain treasurer-major, an officer of equipment, an assistant to the treasurer, and a standard bearer, with the proper number of sergeants and corporals are ample. Then the officers' positions will not interfere with each other, and sinecures will not exist. The necessity of having squadron chiefs, and of discovering important rôles in the demi-regiment, has been well proclaimed, but that does not prevent the chief of squadron, different from the infantry chief of battalion, from being a useless gear, who only cumpers the regiment. When circumstances call the demi-regiment into existence, the senior captain can

take command in absence of the colonel or of his second. The captain-treasurer can easily fill the position of the treasurer-major in addition to his own duty. He has an adjutant and plenty of clerks. The colonel is absolutely in charge of the administration of the regiment. The intendant supervises the accountability and prevents infringements of regulations.

It is claimed that more officers are needed to make reconnaissances. The maneuvers prove that there never are enough, and the example set by them must not be followed. If in war time we should employ officers in this fashion, France could never produce a sufficient number. An officer should not be given a mission in which his platoon or his entire squadron does not participate. He may be temporarily detached with a few men, but never permanently.

The fifth squadron must be complete, the feeder and the resource of the others, which make up from it, their effectives in time of war. The organizations remaining in the fifth squadron after the mobilization of the regiment, can serve for the first reserve formations.

How to complete these formations? The General Staff pertaining to the cavalry, which must be formed so that vacancies will not exist in the reduced regiments, will, with the officers of the reserve, be sufficient. The reserve regiments are mobilized by squadrons, of which only a certain number go with the infantry divisions. This will give the time and the elements necessary for their successive organization. To sum up, it would seem to be sufficient to place the regiment on a peace footing, with its war strength of officers, at least equal to regiments in the corps.

But what about progress? There is a custom in the French army which confuses command and rank; why not give the rank, when the position has been well filled, and we can be sure of not prolonging the military life of a man incapable or played out. What disgrace would there be for a general to command a regiment? He would wear himself out less than in his sinecure position during peace. Why cannot a good captain act as a chef d'escadron, and the treasurer as a higher officer?

There is certainly material and even moral reorganization in these ideas; the number of stripes, derived from well rendered service, does not forcibly imply the right nor the capacity of high command.

ARMAMENT OF THE CAVALRY.

The Horse.—He is good; continually improve him, for the breed quickly deteriorates if not properly kept up; develop, train, inspire him and lighten his burden as much as possible. Seek medium sizes, leaving the giants for trade. Continue to mount regiments uniformly, like the cuirassiers, dragoons and chasseurs at present, in order that we may utilize the resources of our national production and get together horses of the same gait and temperament. But the armament, accoutrement and employment must be made uniform, in principle at least, for coats of different colors may be permitted in order to develop emulation and preserve esprit de corps, which has its worth.

The Soldier.—He is generally good. We should choose him tall enough, but light and slender, even of a delicate appearance, sufficiently well informed, and above all, physically and intellectually quick. The enlistment is well made; we have only to keep him in the path.

The Rifle.—What can we ask better than the point blank at 800 metres, which the "D" bullet gives? The practical limit for firing a gun is the limit of clear sight. The number of cartridges carried is not enough. The horseman will often use his rifle a long ways away from the ammunition sections in front or on the flank of a deployed army, away from the artillery group and the cartridge caissons, which drag along. He must be able to use his carbine to its full effect, *i. e.*, to shoot well and fast if the occasion demands.

The Revolver.—In spite of all deductions concerning its employment during the War of Secession at short range, in the mêlée, it will never be worth the saber point, except to insure suicide. Keep it for officers and N. C. O.'s. It is a baton of magical command. Those who use it should be excellent shots, and should command on the line by their presence and

take command in absence of the colonel or of his second. The captain-treasurer can easily fill the position of the treasurer-major in addition to his own duty. He has an adjutant and plenty of clerks. The colonel is absolutely in charge of the administration of the regiment. The intendant supervises the accountability and prevents infringements of regulations.

It is claimed that more officers are needed to make reconnaissances. The maneuvers prove that there never are enough, and the example set by them must not be followed. If in war time we should employ officers in this fashion, France could never produce a sufficient number. An officer should not be given a mission in which his platoon or his entire squadron does not participate. He may be temporarily detached with a few men, but never permanently.

The fifth squadron must be complete, the feeder and the resource of the others, which make up from it, their effectives in time of war. The organizations remaining in the fifth squadron after the mobilization of the regiment, can serve for the first reserve formations.

How to complete these formations? The General Staff pertaining to the cavalry, which must be formed so that vacancies will not exist in the reduced regiments, will, with the officers of the reserve, be sufficient. The reserve regiments are mobilized by squadrons, of which only a certain number go with the infantry divisions. This will give the time and the elements necessary for their successive organization. To sum up, it would seem to be sufficient to place the regiment on a peace footing, with its war strength of officers, at least equal to regiments in the corps.

But what about progress? There is a custom in the French army which confuses command and rank; why not give the rank, when the position has been well filled, and we can be sure of not prolonging the military life of a man incapable or played out. What disgrace would there be for a general to command a regiment? He would wear himself out less than in his sinecure position during peace. Why cannot a good captain act as a chef d'escadron, and the treasurer as a higher officer?

There is certainly material and even moral reorganization in these ideas; the number of stripes, derived from well rendered service, does not forcibly imply the right nor the capacity of high command.

ARMAMENT OF THE CAVALRY.

The Horse.—He is good; continually improve him, for the breed quickly deteriorates if not properly kept up; develop, train, inspire him and lighten his burden as much as possible. Seek medium sizes, leaving the giants for trade. Continue to mount regiments uniformly, like the cuirassiers, dragoons and chasseurs at present, in order that we may utilize the resources of our national production and get together horses of the same gait and temperament. But the armament, accoutrement and employment must be made uniform, in principle at least, for coats of different colors may be permitted in order to develop emulation and preserve esprit de corps, which has its worth.

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example. As soon as there is fighting on foot, a carbine will be found.

The Saber.—The man is not yet made to charge shaken troops with the horse as his sole weapon. He must have something in his hand. Perhaps in several generations more this instinct will be changed, and the charge made, revolver in fist. To-day it is still only a theory, psychologically inapplicable. But the length and point being sufficient, we may diminish the weight of the saber. The saber-exercise, everywhere now taught, is only time lost. The classical *mêlée* is only possible on a field where two bodies of cavalry are isolated, and further, where no part of either has the idea of fighting on foot or firing into the confusion, in order to disentangle it in any sense, and even then the horse brings the solution. All this does not mean that when you have plenty of time, as is the case with officers, reënlisted men, and certain soldiers of three or four years' service, it is not beneficial to drill in the saber exercises on foot and on horseback. Every sport is useful to develop the soldier, his confidence in himself, his hardihood, his bearing; but with our reduced time of service, for the majority we must stick to what is necessary and not waste time upon exercises, the whole result and utility of which are only approximate in war.

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There is then weight in the armament which can be dispensed with. In the clothing, equipment and saddling there is more still. Cavalrymen should be clothed in woollens of not too bright a color, with water-proof cloaks. The too numerous buttons, braids, trimmings and flaps should be diminished. There should be no more time lost in adjusting and putting men in tight clothes which restrict their movements for fear of bursting. Why put weights on men's feet who have to run across country, jump on a horse and be active? With large blouses, big pockets, water-proof linen or woolen leggings on the leg, high shoes, spurs and a felt hat, Louis XIV. style, is how I see the cavalry of the future.

The saddling and packing should be lighter. The saddle is heavy; it would be an advantage to return to girths trimmed with felt and leather with two blankets under the saddle; to replace iron trimmings with aluminium; to cut off all packing not indispensable, the brushes which are only used in cantonments and when there is plenty of time. Necessary material for cleaning and polishing can be found everywhere. Grooming in war is not done the same as groom-

from Johannesburg to have a look at the cavalry concentrated at Klip River Camp for drills. My arrival was a bit early for them, so saw men and horses in the lines. From a spectator's point of view, things looked very pretty, with whitewashed stones marking the roads and the boundaries of regimental camps; but from a campaigner's point of view from the small space allotted to regiments, and the way horses and men were crowded together, it appeared as if there was still a doubt whether the country was ours. I heard later it had been laid out by an infantry officer. On learning that the cavalry were shortly starting out for work, I off-saddled for a small feed. Soon the regiments, all of which had taken part in the war, filed past me on their way to a plain east of the railway and west of the Zuikerboosch Rand.

I overtook them later, and found them crowded together in what was called "preparatory formation." I watched a small squadron gallop to the front, and hoped to see how the scouting was carried out, but they never opened! I afterwards found it was the General and his staff.

Soon the mass began to trot, and after going about one and a half miles, I saw three lines of flags coming towards them. The Royal Horse Artillery came into action, and then there was a wonderful advance at a gallop, ending in a charge over ant-heaps and ant-bear holes into the flagged people. I remarked to a non-commissioned officer near that this flagged enemy did not attempt to maneuver to outflank the cavalry, and he replied, "Of course not, the General commands them also," and woe betide them if they don't carry out his orders to the letter of the law.

I rode away in disgust; I had seen enough; but knowing their General had not distinguished himself as a cavalry leader in the war, but as a town commandant, I was not surprised; all generals of distinction having gone home to occupy fat billets.

I saw later in the papers that the local Boers had been entertained at luncheon, and that they had expressed their pleasure at all they had seen. No wonder! for how they must have grinned from behind their kopjes at the easier task which the future seemed to have in store for them.

This spring I came to England, partly on business and partly on pleasure bound. Soon after my arrival in London I met several cavalry officers whom I had met during the war, and I was surprised to learn from them "that if a squadron leader wished to get on now, spit and polish, knee-to-knee close drill, and a studious avoidance of useful dismounted work, was the way to do it. On the other hand, if he studied individuality, Boer tactics, mounted or dismounted, concealed outposts, common-sense ideas in combination with sufficient close cavalry drill, he was at once classed as a — mounted infantryman, and thus a marked man."

I further gathered that the cavalry was divided into two schools, the one, those who totally disregarded the lessons of the war and were anxious to return as quickly as possible to what obtained in '99; the other were what might be termed progressive, viz: those who wish to see the cavalry the handy man of the army, a good shot, a good scout, a good horseman, capable of beating a mounted infantryman on a horse, and yet being able to act on his feet equally as well, but fully recognizing that in addition to these things, cavalry must be able to gallop and drill in close formation, and charge home with a sword when opportunity offers.

I decided to pay an early visit to Aldershot, the seat of all learning, where most of the generals who escaped the heavy sword of Stellenbosch, either by luck or by the premature ending of the war, are congregated, to see for myself how the cavalry were being trained under their eagle eyes.

One fine morning I hired a local horse and rode out to what they call the Long Valley. Possibly it is a long valley as far as Aldershot is concerned, but not in accordance with South African views of one. I found it about half a mile long by half a mile wide. There is a good deal of useful ground southeast towards the town, but that apparently was kept for military police to ride about on, at least, judging by the fierce way they ordered me off. Well, on this drill ground proper I found cavalry, infantry, artillery, yeomanry officers, and men driving in boats on wagons, in fact the whole place was scattered over by people moving in every direction like a lot of ants. If I had taken up a position anywhere, I could not

have swung a cat without hitting a foot soldier, a horse or a gun. However, here I was in the midst of the cavalry, doing their short squadron training under the squadron leaders, supervised, no doubt, by many cocked hats. I saw one or two but I don't know who they were. I recognized at once my friend, the same old troop horse, made in England, that we saw so much of during the war, viz.: the heavy, big-footed, bad-shouldered, common brute, who died, at the thought of a long trek, and the long-backed, weedy misfit which the dealers sold at such handsome profits! Not the little short-legged horse the officers used to swear by for work in the war.

The men were still seated on the same old saddle, right away from their horses, instead of on the Colonial saddle we hoped we had converted them to (I believe the officers still use them). Slung to the saddle was the same old heavy sword with bright steel scabbard, which we saw bent and rusty in war. Some troops were tent-pegging and playing what looked like mounted hockey on their clumsy beasts, endeavoring, I presume, to make them as handy as polo ponies and as clever as hunters, as is now being quoted. I pity the man's neck who hunts or plays polo on one.

Some troops were trotting about doing close drill, and occasionally dismounting from their horses on the tops of the hills and falling in in front of them with their rifles, whilst others dismounted under cover, then walked up on to the skyline and leisurely lay down; but when the order to mount was given, they all stood up and ran back to their horses. All ideas of taking cover or concealing their movements seemed to be forgotten. I may remark that these men wore pipe-clayed rifle slings to make them more conspicuous. I ventured to remark to a nice-looking lad near me, as to whether they had not received the new short rifle I heard was being introduced. Fancy my astonishment when he replied: "Don't talk about rifles; we have not shot a course since peace."

I saw also other troops galloping about with swords drawn, charging space. The little scouting I saw consisted of men riding on the skylines, looking like Nelson on his monument.

As every one went home about 11 A. M., I returned to London a wiser and sadder man.

Having seen in the papers that his Majesty the King was visiting Aldershot to watch the field training of the Army Corps, and having heard with amazement that the cavalry were rehearsing their *rôle*, I decided to pay a second visit on that day to see what was considered up to date. I went out to the Long Valley, and was soon attracted towards several cavalry regiments and artillery, formed up in line behind a hill at the south end of the ground. Then suddenly, I presume, when his Majesty arrived, out went one regiment, due north, not preceded by scouts, and without flankers, down into the flat where some flags were advancing, and then charged and disappeared behind a hill west. Then, under the roar of the artillery in action, the rest of the regiments advanced in the same direction in a beautiful line, also without scouts, flankers, supports or reserves, much less rear guard, and leaving the guns without an escort. Fancy what an ignoramus any Colonial would have been considered had he forgotten one of these items in war. Well, this line swept forward, first at a trot, then a gallop, and finally charged the same flags at the same spot. When they had pulled up their horses, which took some time, they retired from both flanks, joined by the first regiment that went forth, back to behind the same hill I found them at, where they faced about and dressed on markers in one long line. I wondered what was going to happen — possibly a march past; but no, they were about to make another charge in line, the whole lot this time.

This system of dressing on markers before a charge is strange. I remember reading, as a boy, that it was done by the heavy cavalry at Balaklava. One of these regiments may have been there, and the old tradition is possibly adhered to by all out of compliment. Well, this long line moved forward and charged the flags at the same place as the preceding charges. I afterwards learnt that the King was seated in a tent overlooking this spot.

Cavalry charges, I always thought, were made like stone walls, knee to knee, and that this was so hard to do that the

cavalry was always practicing it ; but those I saw had a depth of 150 yards, wide intervals between men, and some of them may still be galloping, as far as I could see.

Had this display taken place at the Agricultural Hall, or at the Crystal Palace, one could have understood it; but having seen in the papers, both before and after, that his Majesty and the new Inspector of the Forces were witnessing the field training of the Army Corps, and that this was part of a tactical field day, I could not help thinking, "C'est magnifique mais ce n'est pas la guerre."

The cavalry then disappeared, I believe, to continue the field day ; but when next I saw them, the battle being at its height, and the infantry attack being pushed home, they were lining the plain for the King's motor to pass through.

I dare say I have now opened your eyes as wide as mine as to how the cavalry have profited by the lessons of the war ; and, in conclusion, may I, as a poor humble Colonial, with the best interests of old England at heart, offer them a little advice, which is: learn to scout, shoot, take cover, and conceal yourselves, and to fight in your own enclosed country before you assemble on Long Valleys or other plains to practice tomfoolery, if you don't want to spend another 200 millions to learn a second time your faults.

REPLY TO "A COLONIAL."

BY "ONE OF THE OLD SCHOOL."

[From the *United Service Magazine*, August, 1904.]

I HAVE been a good deal amused by the article in your magazine, July number, entitled "The British Cavalry and the Lessons of 1899 to 1902," where "A Colonial" tries to teach his grandmother. If you can spare the space I should like to offer a few criticisms.

1. With regard to the seven weak points enumerated, every one knows that, as far as the Boer campaign is con-

cerned, they existed; our cavalry has never been and is not now being, trained to fight farmers, natives, or such like, but to meet continental armies, should ever our politicians bungle us into a war with them. With our strength, money and resources, we can always, at the last moment, adapt ourselves to anything, and learn our lessons as we did in South Africa, and on many other occasions. Our army of recent years has been "made in Germany," and is yearly kept up-to-date by able officers who attend German maneuvers. The latest reform is that excellent hat, erroneously called the "Brodrick hat," which was, I believe, the outcome of the visit of the Secretary of State for War, Commander-in-Chief, etc., after peace was declared.

2. "A Colonial" criticises the cavalry maneuvers at Klip River, conducted by a dashing cavalry officer, whom he sneers at as having commanded a town during the late war. Many cavalry generals and C. O.'s commanded towns and block-house lines, in order, I believe, to vary their experiences of war, to improve their training, and, lastly, to give the younger men a chance of leading columns and regiments. I feel quite sure that the gallant officer in question would have led charges in Natal with great *elan* had it not been for the dongas, kopjes and Boers.

3. The next allegation that our cavalry is divided into two schools, viz.: the progressives, as "A Colonial" styles them, *versus* those who adhere to the old traditions.

Thank goodness these new ideas are confined to squadron leaders and subalterns. Our cavalry generals and some C. O.'s still believe in the cavalry charge; they have no fear of the rifle, and I feel confident that they, especially the gallant G.O.C. Cavalry Brigade, Aldershot, would charge unbroken infantry with a *sang froid* as great as that which was, I hear, displayed by the latter officer when he encountered blank ammunition at close range in the recent cavalry reconnaissance.

4. "A Colonial" sneers at the short squadron training. He apparently does not know that in our army we begin at the top and work downwards in our training. The G. O. C. instructs the C. O., and the C. O. the squadron, and so on. We don't start at the bottom, as our squadron leaders lack expe-

THE CAVALRY OF THE FUTURE.

TRANSLATED FROM THE "REVUE DE CAVALERIE."

BY CAPTAIN J. W. HEARD, THIRD CAVALRY, FOR THE SECOND DIVISION
GENERAL STAFF UNITED STATES ARMY.

UNDER this pretentious title do not expect a description of a steel horse, swift as electricity, moving on thousands of unbreakable legs, and mounted by an ironbarbed automaton accurately spitting forth thousands of projectiles; neither expect a monstrous ballet, danced in echelon by a collection of phenomenal horsemen, and a divulging of the secret of victory discovered by a new geometrical formation.

The cavalry of to-morrow, I believe, will very much resemble that of to day and of yesterday. The horse, its distinctive feature, will probably have more blood, and will not be so heavily loaded. The man who rides him will be less of a military machine than at present; that is, he will be less molded into one shape, more thoughtful, more individual, more difficult to command, if it be desired to align him in a troop. He will know the value of his gun and how to use it; he will have a dart which will enable him, like a wasp, to free himself from difficulties near by, and finally he will be bound to his comrades by the sentiment of the command.

This is a very nebular psychological case which I will try to explain. Without pretending to read the soul or the human instinct like a book it can, I believe, be positively stated that the secret of future victory lies in the community of thought and in the moral tie which binds every individual energy and action towards the same aim. It is a new spirit with which we must become acquainted. The present arms are of such effect and precision that they produce, when well handled, unthought of results. But for this, they must be in hands of men of perfect individuality, cool and brave, as indicated by the word, a correct translation of the Latin word *Vir*—a man.

It is not by preparing figureheads or by killing the individuality, by exercises in confusing gatherings on the drill ground, that we can prepare horsemen to play their rôle in war, spending their energy and risking life for the common end.

This study will be divided into three parts :

Organization and armament of the cavalry.

Its instruction.

Its employment.

All of these are military problems. The use that we can make of a soldier depends upon his moral and physical qualities, upon his arms, and above all whether he knows how to use them, upon his equipment and his food supply ; or to sum up, in the moment of action upon his capacity of "can and will."

The regiment is the organization unit of cavalry. The cavalry brigades, divisions and corps, if we are afflicted with enlarged ideas, can be established at the moment of use. They exist with difficulty when assembled for any considerable length of time, and their employment in mass is rare.

The destruction of the French cavalry in 1812 was caused quite as much by its premature organization into corps at the beginning of the campaign and the consequent difficulty of its subsistence, as by everything it suffered during the war.

I shall stir up many contradictions. There are too many officers in a regiment of cavalry. A commandant, a second in command, five captains, three officers and an adjutant for each squadron, an instructor, a captain treasurer-major, an officer of equipment, an assistant to the treasurer, and a standard bearer, with the proper number of sergeants and corporals are ample. Then the officers' positions will not interfere with each other, and sinecures will not exist. The necessity of having squadron chiefs, and of discovering important rôles in the demi-regiment, has been well proclaimed, but that does not prevent the chief of squadron, different from the infantry chief of battalion, from being a useless gear, who only cumpers the regiment. When circumstances call the demi-regiment into existence, the senior captain can

take command in absence of the colonel or of his second. The captain-treasurer can easily fill the position of the treasurer-major in addition to his own duty. He has an adjutant and plenty of clerks. The colonel is absolutely in charge of the administration of the regiment. The intendant supervises the accountability and prevents infringements of regulations.

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ing in garrison. The curry-comb and a small brush and a wisp of hay or straw are enough. The packing should be flexible enough to put in to it in case of necessity, provisions for two or three days. It is a matter of study before hand, for at the last minute we might not have the necessary inspiration.

All these points are only in the rough, but I believe that it is along these lines that the cavalryman of the future must study and seek the solution. Lightness and ease must prevail over the desire for display. Photographers and artists will lose, yet when the eye becomes accustomed thereto, it will perceive elements of taste and elegance. The spirit of instruction should accompany recruiting necessities and the social methods of the hour. We must not imagine that the decrease in the term of service forbids the idea of making cavalrymen. It can be done in one year if we care to get clear of old formulas, and seek solely to make men capable of using and caring for their arms, horse, rifle and saber, and if we resign ourselves to abandon everything that is merely habit or useless show.

Throw open the regulations to the principles of the different steps. This libretto makes me think we ought to have some celebrated dancing master in order to learn "carry the left forward, toe slightly turned out, ground it." Our parents rewarded our nurses with a gold Louis when we learned to take our first step. This gold piece was thrown out of the windows, for when twenty-one years old we have to begin all over again.

How much time is lost, how much ambition is withered by a too rigid execution of the most trivial rules! The ballets danced by pretty women in pink tights, among electrically lighted flowers are better looking than those danced in the barrack yard, or on the drill ground by badly shaved, badly combed and badly dressed men. There will be work in accustoming ourselves, during indefinitely prolonged periods of peace, in shaping men for war, and yet not lose their time from parades, in developing to the utmost each individuality, permitting it to exist in the assemblage, and in destroying force of habit in the architectural regularity of

troop formations. We can never develop individual instruction too much. We must seek how to make practical horsemen, caring for, mounting and leading docile and well trained horses, knowing how to use their weapons according to circumstances. Avoid making acrobats, circus riders and automatons. In addition to the officers, our sergeants and corporals must absorb these ideas. The examinations which the board makes them undergo periodically are summed up in a certain amount of contortions which they execute and a series of technical words, often ludicrous, which they are taught, parrot like, without understanding. These tedious words seem necessary to sanctify their promotion. Character, simple good sense and personality are the last things considered. Afterwards, we are much astonished that those who have received their grade are incapable of commanding or instructing, and that it is necessary to reduce them when they would have perhaps made excellent soldiers. They know so well their theory and the most complicated words of hipology (without knowing how to apply them), that we are convinced of their intelligence and ability.

The employment of cavalry and its instruction are not the same thing. It is certain, however, that the spirit of instruction influences the usefulness of the arm.

The same cavalry, mediocre under one chief, can almost immediately become very good under another. In addition to natural qualities, it is indispensable that a chief should have the habit and spirit of command. Does the present duty of cavalry generals put them in the necessary condition? They cannot be in it unless kept at the head of a regiment. Experimental practice is continually getting scarcer. Everyone studies to excess the things which can again be studied; but they fail to render a sufficient account of the fact that in the employment of cavalry true tactics do not exist, or at least only momentarily. The past should be studied, but to lose time in regretting it and trying to return to it is contrary to the human intellect, which is pushing always to a change for the better, or what at the present moment we believe to be better. Forward, forward! repeats Bossuet to humanity.

What conclusions are there to draw from what cavalry did in the Transvaal? What conclusions relative to what it can do in our hemisphere? How could the English make reconnaissances with their long lines of deployment, in that unknown country, sparsely inhabited and little cultivated, where their horses could not find nourishment to which they were accustomed? The veldt grass satisfied the Boer ponies, but was not enough for foreign horses.

The British clung to the railroads, to the few routes which served as guiding points, and dared not venture into the open country, where the Boers maneuvered intelligently.

Reconnaissance and exploring are generally made by fighting. Rarely can one man by himself see and render an account. The contact must be made with the rifle, and protected or broken, as circumstances demand. Scouting is the beginning of the battle, and not the base of the plan of campaign, which is fixed beforehand, other things being given, strategy, politics. Cavalry, by its mobility, feels a long way in advance of the uncovered enemy, locates him, attaches itself to him until the arrival of the main body, or breaks off the fight, if necessary.

To demand strategic information of cavalry, is generally to prepare oneself for disappointment. This information is no longer fresh or true when it arrives. The tactical information at the beginning of the battle is different.

How could the English cavalry, instructed and armed, according to Mr. Conan Doyle, like that of Charlemagne, have adapted itself, from day to day, to the necessity to hunt out the wings and the rear of the long lines where the Boers were intrenched, and understand that the latter must be forced out of their holes before being charged?

How could the Boers, ignorant of the discipline of concerted action, of the sentiment of command, have individually guessed what they could have gained, if once, when the English were beaten back in confusion by their fire, they had mounted their horses and pursued to the bitter end? What intuition could have made them come out of their holes and hurl themselves, with mounted groups, upon the retreating

line of fugitives, while the foot groups maintained the advantage already held?

Instruction is the state of mind formed in time of peace, the sentiment of military stability under the same command which can so lead the different groups mutually to aid one another, as to attain the total destruction of the enemy. It is also, as Bonvalot wrote, the national sentiment, life, sufferings and common interest, which develop the spirit of military stability in the fight.

The armies of to-day closely resemble the Boer army. The reserves enter them a great deal with their independence. What influence will the spirit of instruction and the theoretical tendencies of employment have upon individual action?

Who can deny the importance of this action and consequently the influence of instruction and of maneuvers?

And I am wholly convinced that we are here entirely wrong. I am not a believer in those theatrical evolutions where we only seek a training which can be but approximate, and possibly even to the detriment of mobility, and of things unexpected; where masses are made to maneuver when they probably will not maneuver in war. Generals and colonels acquire the custom of having their command always bunched behind them; when in war, if they wish it to render its maximum useful effect, it must be accustomed to act by fractions, coöperating towards a single aim.

This is, in fact, the definition of echelon movement, but not of that which has become a drill arrangement, where everyone regulates himself upon his neighbor and is absolutely tied, and which, contrary to the aim of the regulations, ends in making cavalry stiffer and heavier than it was 200 years ago.

Echelon is not a combat arrangement, but a result of the combat. To attack or to defend, we engage only enough for the thrust or the parry, and according to circumstances the remaining fractions are employed to the last, if necessary, united or separately. But to start to the attack in a previously known echelon, and to march in that formation, closing up the echelons on each other, on their guides, is, near a

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well informed and active enemy, to expose them to destruction, without being able to give battle.

The echelon which I mean, platoon, squadron * * * is connected with the others only by the object, which generally at the setting out is some distance away; little by little it draws near and approaches the fractions which are operating against it. At the moment of attack some can be united, but they must not wait for others, and each should do the best it can towards the common end. The chiefs go with an echelon, and according to the result of the combat they act with the nearest united one at the last. How much is unforeseen! Yes, but the secret of victory in the future is in the unforeseen.

The unforeseen, coupled with what I called at the commencement of this study the "sentiment of command" or obedience, (which I should like to see replace the apparent discipline of "Garde à Vous") follows a known and understood plan, simple and without fine phrases, and when one knows his leader, all forces are concentrated on the end in which all live and believe.

What a difference from what was done in the last European wars, and from what we saw done in the maneuvers. From the first day cavalry was massed in united large bodies waiting for the opportunity which never came, and which it should have sought out and created if it wished to escape being forced into a charge where it would be sacrificed—a heroic and useless show. Useless, did I say? Are the most important results worth the dismemberment or the loss of one or two more cavalry divisions, which cost much money and, above all, time to reconstruct? Cavalry can only charge troops shaken and ripe for retreat. Then the horse is the real weapon; it would be useless to put a saber in the trooper's hand, if with the instinct of the horseman, it gave but little aid to his movement and fierceness, if I may use an expression so little in accord with the present benevolent philosophy. The importance of the movement of this cavalry is incalculable, a movement which is not the classic charge of the regulations, but rather a combination

of land slides coming from everywhere, and always following the common prey to the death.

Could Prince Frederic Charles have foreseen this employment of cavalry, when, after 1870, he wrote, that the cavalry of the future would be formed in one rank?

If its objective has not been well shaken up by some other arm of service, the cavalry itself must try to shake it before hurling itself upon it.

It is the utilization of its weapons, combined with its capacity for mobility, which must produce the most numerous and unforeseen results. Some platoon or squadron groups can approach rapidly, to overwhelm in a few seconds an objective point by concentrated fire. But if a false move is made, they either remount or the other fractions mounted and held sheltered in readiness, throw themselves forward like an avalanche. The formation matters little, only the aim of the chief must invariably be understood. Attacks must be made from all sides before the disorganized enemy can recover his self-possession.

The wavering which permits a charge upon cavalry, as well as upon infantry, can be sought in a similar manner. The maneuvering echelon, designed to permit the combat echelon to arrive at the shock, has, in order to fulfill its rôle, different weapons, the effect of which it must utilize, according to the terrain. It must recollect that its principle arm in this endeavor will often be the rifle. Perhaps, also, horse artillery should be used.

This disorder can be strategically produced by operations against the supplies in the rear, the lines of communication, or even solely against the populations of the invaded countries. The customs of this day demand enormous quantities of provisions and ammunition. At the least break in the regularity of their arrivals the masses become demoralized, and cannon and small arms induced to silence, are only encumbering material. This is a use of cavalry which the last wars, except that of Secession in the United States, did not adopt. In the Transvaal, a raid of small extent is cited, from Prinsloo, in rear of Methuen, to the station of Graspan, after the days of Modder River. This little operation meant a great deal to

the English army during the fifteen days of inactivity which followed that series of combats.

In a like manner De Wett speaks in his book, during the operations around Paardeberg, of the seizing of a convoy, which forced Lord Roberts, in order not to be stopped, as did Methuen, to put his army on half rations until the hemming in and capitulation of Cronje. The English army, despite its being accustomed to good living, endured this privation. What an inexhaustible mine in this order of ideas! But to develop it we must know how to march cavalry, how to make it hurry over roads for miles and miles with many columns and overcome the fatigues of long marches. We must know how to make men and horses live, by carrying what is necessary when we cannot live on the country; how to break garrison habits; how to give in the twenty-four hours as much as possible of the indispensable nourishment and repose, by utilizing convenient hours and localities. We must free ourselves from all dead weight, carriages, doctors, veterinarians. We must be well trained and trainable. The cavalry officer who has not passed his life with his horse, whatever be his age or grade, is not capable of commanding in his arm of service. He must live, think, reflect, decide, drink, eat, and even sleep with his horse; and that throughout his whole military life.

To-day, when we make fifty kilometres we think we have gone round the world, and we rest, publishing our prowess and photographs in the newspapers. The arts of ballets danced upon neatly swept drill grounds, absorb both time and men. We criticize distances and intervals, which is always easy, since we take as standards the figures imprudently printed in the regulations.

The beautiful manœuvring grounds should be sold and with the proceeds, new terrains, different in soil and appearance, leased for periods of a few days or a few months. But let us have no more classic beautiful terrains for cavalry, where masses can be made irresistible to manœuver. They must be avoided at any price. The more difficult or cut-up a terrain is the better, as for cavalry. We do not expect to meet any of our old surprises introduced with a better

effect. We must hunt for that terrible labyrinth of which Dr. Conan Doyle speaks, and use it against the thoughtless ones who live in it.

This is the cavalry of the future. More cavalry than ever; that is to say, always moving towards a clear aim, arriving when and where it is not expected, producing sudden effects, pursuing or disappearing in order to reappear; executing ever the unforeseen, the unexpected, the impossible, the unimaginable.

This is what we should figure out in our maneuvers in order usefully to prepare ourselves for war. But is it possible? To be sure, up to a certain point, and on condition that the fault-finders are honest and sincere. But we must forsake the daily deification (where work ends towards noon), on an open terrain, around a point where authorities and strangers, peaceful spectators, lunch after the exhibition. Then the cannons thunder, the infantry climbs to the assault, the cavalry charges, and the fairy drama is ended with a flag-waving balloon ascension. What will be the result of victory decreed and of criticism which follows this phantasmagoria?

The battle will be composed of partial combats, often far away and unseen—connected only through the final aim, in which all must cooperate—an aim which must not be chosen at hazard by the director of the maneuvers, but because of its strategic importance. There must be umpires everywhere to judge the performances, and in the evening or the following morning they can sum up the ensemble of the day and draw conclusions—never routine or dogmatic deductions, but only ideas and subjects of discussion.

Originality in the employment of cavalry is a grand quality. All principles and receipts are placed at the service of incapables who ought to go back into the ranks or on the retired list. Cavalry chiefs should be bold and full of new ideas every day. Their spirit must be active and on guard, but not in an office with the feet against a stove. A cavalry officer has no ability who does not pass his life with his horse. The troop sees him, has its eye on him, and understands him instinctively. One thinks of a horseman only

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as on horseback, and the ideas which spring up in the rest and ease of an office are not the ideas of a horseman, but of a capitalist, a mathematician or a poet. Poetry is necessary for a horseman, but it is the poetry of motion. He should dream and do superhuman things which later become legendary. Many at thirty years old are incapable, but some remain enthusiastic until death, fools, discussed and ridiculed in time of peace, heroic and invincible in war.

PONY BREEDING IN ENGLAND.

BY CHIEF VETERINARIAN D. GOLDBECK-DIMIN.

FROM "MILITAR-WOCHENBLATT," No. 110,

TRANSLATED BY JOHN S. JOHNSTON, 1ST LT. ARTILLERY CORPS, U. S. A.

THE greater number of horses in use in England are ponies. From time immemorial the doctors' carts, the milk-wagons, the cabs and other public vehicles have all been drawn by ponies. "Young England" has almost always learned his horsemanship on the back of a pony, not merely on the road, but also in the chase.

The introduction into England of the game of polo gave a marked impetus to the breeding of small horses, which had never fully recovered from the attempt made during the middle ages to suppress it, in an effort to encourage the breeding of heavy horses. This favorite game among horsemen was imported from India. The Mauipurits, from whom the English soldiers learned the game, used ponies twelve hands high. It was introduced into India proper in 1864. (Sir Joseph Fayer, *Recollections of My Life*, Bartenheim, 1900.) It was first played in England in 1872 by the officers of the Tenth Hussars, who had just returned from India. In the rules of the Indian Polo Association the height of the pony was given as thirteen hands three inches. In England the height was first raised to fourteen hands, and later, as it

was found very difficult to find suitable ponies of this height, to fourteen hands two inches.

From the above rules respecting height it will be seen that the English and German interpretations of the term pony differ considerably. With us, a horse that is fourteen hands, that is, 1.42 m. high, would be called a small horse; no horse over 1 m., or at the most, 1.20 m. high would be called a pony. When speaking of English ponies we always think of the little Shetland ponies, while in reality there are many other good and interesting breeds native to the country. There is still less resemblance between what we understand to be a pony and the English polo pony, an animal fourteen hands two inches high, strongly built, capable of carrying a weight of thirteen stone (a stone equals fourteen pounds), having great endurance, active and obedient, full of life and energy.

In England such ponies are not to be found at all times, and consequently the price of good polo ponies has risen enormously, often exceeding that of good thoroughbreds. The Polo Association consequently took a lively interest in the breeding of ponies, but obviously only in such breeds as were suitable for riding. These hunter-ponies were entered in a separate class in the stud book. The Association unquestionably deserves great credit for the energy with which they labored in the cause; prizes were offered, exhibitions were held, and various other means were resorted to to encourage the breeding of polo ponies.

Following the South African War another interest was brought to bear upon the industry. It had been discovered that the polo pony was the ideal mount for mounted infantry. The reasons for this are so plainly to be seen that it does not seem necessary to set them forth here in any greater detail. The Polo Association went a step farther and was reorganized as the "Polo and Riding Pony Society," established to promote the breeding of ponies for polo, riding and military purposes.

In this way all ponies suitable for riding, including all available breeds, were given the opportunity of entry in a stud book; but no provision whatever was made for the entry

of driving ponies. The only course open to these ponies was to secure entry in the Hackney stud book. So it comes about that Welch ponies may be found entered in entirely different books. No provision was made for a family stud book for the Shetland ponies. The Welch breeders were the first to appreciate this anomaly and to take steps to get up a stud book. The first volume of this book is still incomplete. The breeders of other sections—Dartmoor, Exmoor, New Forest—will certainly follow the example of the Welch breeders within a very short time.

The Polo Association did not take kindly to this idea at first; but it is now believed that it will be to their advantage also, as it will permit the selection of the best specimens of each family for breeding purposes. The production of large numbers of polo ponies and mounts for mounted infantry will then be a much simpler matter than it is at present.

Although almost nothing is known about them, the ponies of England are, perhaps, the most interesting class of horses in existence. Let us consider the New Forest pony. In Hampshire there is an immense tract of land called the New Forest, comprising some 42,000 acres, mostly poor, swampy moorland; this is the common pasture of the "Forsters." Here the ponies are allowed to run at large, the size of the herds depending upon the ability of their owners to care for them during the winter, and ranging in number from 100 or more downward. Since the government collects a "marking" fee of two shillings per head, it takes pains to ascertain the exact number of animals in these herds. The last enumeration showed 3,000 head, of which 1,800 were brood mares. From spring until autumn the ponies are allowed to roam at will, feeding wherever they choose. Each stallion collects and jealously guards his own "harem." Naturally the closest inbreeding is unavoidable. In autumn some 1,800 head are taken up; the rest are allowed to remain at large.

The young animals are practically never caught except when they are to be marked or sold; at all other times they

are allowed to run wild. In the entire community some 2,000 head are used for working or breeding purposes.

The New Forest Association is seeking to improve the breed by introducing genuine black Galloway stallions, imported from Rum Island, on the west coast of Scotland, where they are raised in much the same manner as the New Forest ponies. Excellent results have also been obtained from thoroughbreds, particularly the famous stallion Marske; but the wild ponies do not seem to take kindly to the blooded stallion. If turned loose among them, the wild or half-wild herds will almost always drive him out.

The New Forest pony is rather large, from twelve hands to thirteen hands two inches high. If taken up young and well fed he grows as tall as fourteen hands two inches. Although poor specimens are not rare, the greater part of these ponies are of very good quality. Their hoofs are strong and well formed, their hips are often somewhat sloping, but their hocks are the best one could wish. They are of a great variety of colors, although dark brown or piebald specimens are rare. The large number of dapple grays among them indicates a strain of Arab blood. Their chests are not always broad enough, but their shoulders are strong and well built. A cheerful and contented disposition under all circumstances is one of their characteristic traits. If taken entirely wild, their domestication is never completed until they are thoroughly broken; but this accomplished, they are perfectly good natured and tractable. They are never treacherous.

The ponies of Wales inhabit all the hills and wastes of the twelve counties, so that it is impossible to give any statistical data regarding them. Numerous herds also find their feeding ground in the adjoining sections of Shropshire, Herefordshire and Monmouth. To be sure the shepherds have driven them out of many good pastures, but there still remain many more which the sheep have made "foul," but the ponies find very much to their liking.

An effort is being made to improve the breed by introducing thoroughbred stallions, in particular small Hackneys (Comet, Fireway, Alonzo, The Brave), and occasionally a

right trim Hackney poney is produced. The strong trotters are called cobs.

In making up the stud book in North Wales the following have been fixed upon as typical features of the pony: Height, not over 12.2 hands. Color, dark brown or brown preferred, gray or black admissible, chestnut or piebald not admissible. Action, like that of the hunter; a slinking gait is inadmissible. The pony must move promptly and with life, with free shoulder action, hind legs well bent and hind quarters well drawn under. General characteristics: The pony must display marked pony traits, must unite with a robust constitution that unmistakable spirit which is common among mountain ponies; its whole appearance must indicate life and vigor. Head, small, sharp muzzled and well set on; forehead, wide and tapering toward the nose; nostrils, wide and flexible; eyes, bright, kind, intelligent and expressive; ears, small, pointed and well formed; jaw, fine; throat should have no indications of shortness of breath or broken wind. Neck, of suitable length, strong but not too heavy, with heavy mane in the case of stallions. Shoulders, good shoulder blades. Back and loins, strong and well covered by muscles. Hind quarters, long; tail, handsomely carried and well set on, resembling the Arab as closely as possible. Hocks, low, sharply outlined, with powerful joints; never bandy legged or cow-hocked. Forelegs, well set on; not tied in, good, muscular forearm; short cannon; fetlocks not too long; fetlock joint, broad and of good conformation; hoof, sound and hard.

Exmoor and Dartmoor are extensive pony breeding estates. The first comprises 18,810 acres, mostly in possession of the heirs of Mr. Knight. When the estate was sold to Mr. Knight the original pure stock of Exmoor ponies did not pass with the estate, but were taken by the former proprietor, Sir F. Dyke Acland, to Halnicote, Taunton; only some twelve mares were left at Exmoor. After numerous futile attempts to cross the Exmoor with other breeds, the breeders returned to the pure Acland stock, and at present are producing some splendid animals, showing on a small scale all the features of the thoroughbred.

The Dartmoor ponies enjoy a wild life similar to that of the Exmoor. As a rule they are born and spend all their lifetime in the open, without being broken to either harness or saddle. The greater part of the last named ponies are dark brown. The Dartmoor ponies often attain a height of 13.2 hands; the stallions fourteen hands. Obviously there are among these a number of improved breeds particularly suitable for polo purposes.

The ponies or "Galloways" of Cumberland and Westmoreland have always been famous for endurance, the "Feltsider" (mountain bred) as well as the pony from the moors. At the present time the greater number of the herds, often numbering sixty head, are still entirely wild. The animals employed in agriculture are also used for breeding purposes, but proper attention is not paid to the selection of stallions. The only improved breed of these ponies, viz.: that bred by Lord Christopher B. Wilson, of Rigmaden Park, Kirkley Lonsdale, Westmoreland, the so-called Wilson ponies, have gained a world-wide reputation. They are powerful ponies, resembling the cob, with strong muscular development and a characteristically deep chest.

The Connemara ponies of Ireland are animals ranging in height from twelve to fourteen hands and upward. Lately they have been crossed with small hackneys, with very good results. Like all wild horses, they are spirited, lively and sure footed. The moist climate—perhaps the most humid in all Europe—has given them a very long coat. Due to their Spanish ancestry there are many pacers among them.

From the most ancient times the ponies of Scotland have been famous. They are rather large, thirteen to fourteen hands, and will evidently become larger by breeding. They resemble the little cobs of Wales. They are frequently called Galloways, but this name belongs properly only to the black ponies of the Island of Mull.

The smallest of the ponies, the Shetlands, are most sought for children, because of their tractability. There are on the island some 860 ponies employed in agriculture and some 4,000 which run wild, or are used only for breeding purposes. The number of these wild ponies and the scarcity of natural

feed prevents them from growing to any great size. The islanders have to fight with these wild ponies, which are accustomed to feeding themselves summer and winter, for such supplies of seaweed as they need. At times the ponies, which are wonderful swimmers, are driven to astonishing distances from the land.*

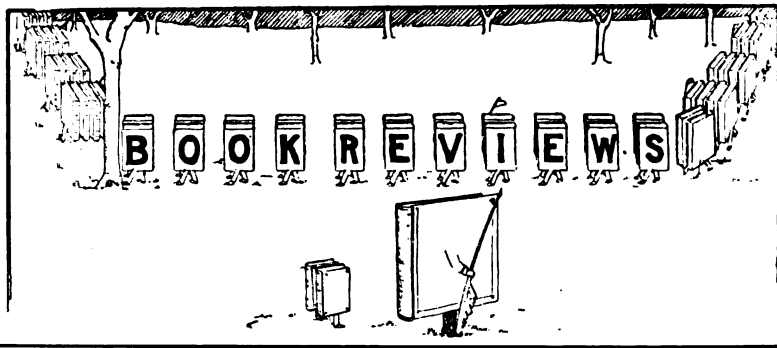
*For an exhaustive study of these races, see my book, *Horsebreeding and Breeds of Horses in England*. Leipzig, 1902. R. C. Schmidt & Co.



AN ENGLISH OPINION.

[From *Broad Arrow*, August 20, 1904.]

The success of the U. S. Cavalry Association and its JOURNAL, written by cavalymen alike keen and capable, suggests that for the British cavalry there might and ought to be some similar institution. At present there is none; and yet never has the cavalry arm been so important and its training and organization such matters of deep and earnest consideration. Those who wear the shoe know if and where it pinches; those who have served or are serving in the cavalry have felt or are feeling the pinch, and their practical experiences should not be lost. Of course, there is the *United Service Institution* available for the discussion of cavalry questions, but only to a very limited extent, and an association devoted specially and entirely to cavalry matters could and would go much more thoroughly into them than is possible in an institution ranging over the whole area covered by the navy and army. Such thorough consideration of cavalry details, which go to make up complete efficiency, is, it seems to us, almost a necessity, and it is to be hoped that steps may be taken to supply this want. What our cousins over the sea can do so well and with such practical effect surely we might do too. And what, in this sort of way is done with admirable results by the Royal Artillery and Engineers is a distinct encouragement to the cavalry. In response to a suggestion in our issue of the 21st May last, the editor of the JOURNAL OF THE U. S. CAVALRY ASSOCIATION has kindly forwarded copies of his publication to the principal military clubs and institutions, in order to give an idea of what is being done in this respect by the American cavalry. In it will be found the rules and regulations governing the Association, which may prove of assistance to officers of our own mounted branch who are inclined to consider the question of the formation of an institution on similar lines.



**Kansas
Historical
Society.**

Volume VIII has been received and is a most interesting book. Its publication is under the direction of Hon. Geo. W. Martin, Secretary of the State Historical Society of Kansas.

The volume contains much of interest to army men. A historical review of Kansas without a mention of the army would be like Hamlet with the principal character omitted.

Former Adjutant General Fox, of the Kansas National Guard, gives an extended review of the work of the Seventeenth Kansas Cavalry. The sketch is written in a happy vein and inspires the reader from beginning to end. A story by Robert M. Peck, who served in the First Dragoons before the war, gives his experience on the Kansas plains. It is a paper that deserves to be read by every soldier, particularly every cavalryman. Indeed, a military library can scarcely be considered complete without the volumes of this association. Officers of the army who wish to secure it may do so by writing to the secretary of the society at Topeka, Kansas.

**The
Semaphore
Simplified.**

“The Semaphore Simplified” is the title of a system of cards for learning the signal drill, just published by Gale & Polden, Ltd., of London, England. At first sight the learning of the letters seems very easy, especially when you take

them in order of the alphabet, but when the letters are taken out of order, as in spelling words, confusion results. One cannot apply the rules laid down so easily.

The system also depends upon holding two flags at certain fixed angles, in some cases differing by only forty-five degrees for different letters. It can readily be seen that in fast work one will vary the angles, and the result will be a guess as to what the sender intended to make.

The old system now in use has only three movements, to right for "one," to left for "two," and to front for "three." The combination of numbers is not difficult to learn, and if the flags are not waved through a fixed angle it does not make any material difference, as one can easily tell whether it is waved to the right, left, or front of the sender.

One can easily become proficient by practice with the system now in use, while it is doubtful if one could ever rely on the "Semaphore Simplified."



MEMBERSHIP OF THE UNITED STATES CAVALRY ASSOCIATION.

We give the list of members in the Association in somewhat different form, the names being now arranged alphabetically.

It is the intention to correct this list with every issue. If any errors are noted it will be conferring a favor if you will call attention to them.

The Association is anxious to increase its membership and in its efforts to do this all the members can give their assistance. If you know of any prospective members or subscribers, or any person who might be interested in the JOURNAL, the Council will be glad to have the address so that a copy of the JOURNAL may be mailed.

ALPHABETICAL LIST OF MEMBERS.

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 Bamberger, R. S., 2 lt. 7 cav., Camp Thomas, Ga.
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 Barker, C. R., lt. Anselton, Ala.
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 Barriger, Wm. S., 2 lt. 15 cav., Ft. Ethan Allen.
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 Barton, R. M., 1 lt. 5 cav., Ft. Huachuca, Ariz.
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 N. J.
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 Bell, J. F., brig. gen., Ft. Leavenworth.
 Bell, O. W., capt. 7 cav., Ft. Myer, Va.
 Bell, Sherman M., adj. gen. Denver, Col.
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 Bowditch, Myron B., 2 lt. 10 cav., Ft. Washakie.
 Bowen, W. H. C., maj. 12 inf., Buffalo, N. Y.
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 Bowman, George T., 1 lt. 15 cav., Ft. Ethan
 Allen, Vt.
 Boyd, Carl, 2 lt. 3 cav., Ft. Yellowstone, Wyo.
 Boyd, Charles T., capt. 10 cav., Reno, Nev.
 Braden, C., 1 lt. ret., Highland Falls, N. Y.
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 Breck, Samuel, brig. gen. ret., Boston, Mass.
 Brees, H. J., 1 lt. sig. corps, Ft. Leavenworth.
 Brett, Lloyd M., capt. 7 cav., Washington, D. C.
 Briand, Christian, 1 lt. 16 cav., Ft. Myer, Va.
 Bristol, Matt C., 2 lt. 13 cav., Manila, P. I.
 Brooks, E. C., capt. 11 cav., Ft. Sheridan, Ill.
 Brown, L. T., lt. col., 33d & Smallwood sts.,
 Pittsburg, Pa.
 Brown, L. G., 2 lt. 12 cav., Manila.
 Brown, Oscar J., capt. 1 cav., Ft. Sam Houston,
 Texas.
 Brown, H. A., capt. 4 cav., Ft. Leavenworth.
 Brown, William C., maj. 3 cav., Ft. Assini-
 boine, Mont.
 Bryan, R. B., capt. 5 cav., Ft. Grant, Ariz.
 Bryant, W. A., capt. Montclair, N. J.
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 Buchan, F. E., 1 lt. 3 cav., Fort Leavenworth.
 Bull, Henry T., 2 lt. 13 cav., Manila, P. I.
 Burkhardt, S., jr., capt. 19 inf., Vancouver
 Bks., Wash.
 Burnett, Chas., 2 lt. 15 cav., Ft. Myer, Va.
 Burnett, George R., 1 lt. ret., Iowa City, Ia.
 Burroughs, James M., 1 lt. 12 cav., Manila, P. I.
 Bush, F. N., lt., Peoria, Ill.
 Butler, James S., 1 lt. sig. corps, Manila, P. I.
 Butler, Matt C., jr., capt. 7 cav., World's Fair
 Station.
 Butler, Rodman, 2 lt. 6 cav., Ft. Keogh, Mont.
 Byram, Geo. L., capt. 6 cav., Ft. Meade, S. Dak.
 Cabanis, A. A., capt. 24 inf., Ft. Miscoula.
 Cable, Wm. A., lt. 103 W 56th st., New York.
 Cabell, De Rosey C., capt. 1 cav., Ft. Clark, Tex.
 Caldwell, R. C., 1 lt. 7 cav., Camp Thomas, Ga.
 Calvert, E. I., 9 cav., Ft. Walla Walla, Wash.
 Cameron, Geo. H., capt. 4 cav., Ft. Riley.
 Camp, Beauford R., 2 lt. 8 cav., S. Francisco.
 Card, C. S., lt. 1139 Clarkson st., Denver, Col.
 Carlton, C. H., brig. gen. ret., Itey, Westchester
 County, N. Y.
 Carpenter, E., capt. art., Ft. Totten, N. Y.
 Carpenter, L. H., brig. gen. ret., Philadelphia.
 Carr, Camillo C., brig. gen., St. Paul, Minn.
 Carr, Eugene A., brig. gen. ret., Washington,
 D. C.
 Carroll, Henry, col. ret., Lawrence, Kans.

- Carson, John M., jr., maj. Q. M. D., West Point.
 Carson, L. S., 1 lt. 8 cav., Ft. Sill, Okla.
 Carson, T. G., capt. 10 cav., Ft. Washakie, Wyo.
 Carter, Wm. H., brig. gen., Manila, P. I.
 Cartmell, N. M., 1 lt. 10 cav., Ft. Robinson, Neb.
 Case, Frank L., 1 lt. 12 cav., Manila, P. I.
 Cassidy, H. C., capt., 2205 Calumet ave., Chicago.
 Casteel, D. T. E., 1 lt. 7 cav., Camp Thomas, Ga.
 Cathro, Thos. E., 2 lt. 13 cav., Indianapolis, Ind.
 Cavanaugh, H. La T., capt. 10 cav., Ft. Robinson, Neb.
 Chaffee, Adna R., lt. gen., Washington, D. C.
 Chapman, G. L., lt. 25 inf., Ft. Reno, Okla.
 Chapman, L. A. I., 1 lt. 1 cav., Ft. Leavenworth.
 Chase, Geo. F., lt. col. 12 cav., Manila, P. I.
 Chase, John, brig. gen., Denver, Col.
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 Clark, Will H., 913 Marquette Bldg., Chicago.
 Clark, Wm. F., capt. 2 cav., Manila, P. I.
 Clayton, P., jr., capt. 11 cav., Jefferson Bks, Mo.
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 Cooke, J., 2 lt. 11 cav., Jefferson Bks, Mo.
 Coffey, Edgar N., 1 lt. 2 cav., Manila, P. I.
 Cole, C. W., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Cole, Geo. M., gen., Hartford, Conn.
 Cole, James A., capt. 6 cav., Ft. Meade, S. Dak.
 Coleman, S., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Collins, R. L., 2 lt. 2 cav., Manila, P. I.
 Collius, Thos. D., maj., Gainesville, Tex.
 Comly, George B., 1 lt. 3 cav., West Point.
 Conkling, John, jr., capt. art., Ft. Ethan Allen.
 Connell, W. M., 1 lt. 7 cav., Camp Thomas, Ga.
 Conrad, C. H., jr., capt. 3 cav., St. Louis Exposition.
 Conrad, Julius T., capt. 3 cav., Chester, Pa.
 Converse, G. L., capt. ret., Columbus, Ohio.
 Cooley, W. M., 2 lt. 5 cav., Ft. Wingate, N. M.
 Cooper, C. L., brig. gen. ret., Denver, Col.
 Cooter, Harry N., 1 lt. 12 cav., Manila, P. I.
 Coppock, E. R., 2 lt. 3 cav., Ft. Apache, Ariz.
 Corcoran, Thos. M., capt. 13 cav., Manila, P. I.
 Cornell, W. A., 1 lt. 10 cav., Ft. Robinson, Neb.
 Cornish, L. W., capt. 9 cav., San Francisco.
 Coughlan, T. M., 1 lt. 2 cav., Manila, P. I.
 Counselman, W., capt., 335 Rush st., Chicago.
 Cowell, T. R., capt., Parkersburg, W. Va.
 Cowin, W. B., 1 lt. 3 cav., Ft. Assiniboine.
 Cowles, W. H., 2 lt. 4 cav., Ft. Riley.
 Cox, Edwin L., 2 lt. 9 cav., San Francisco.
 Cox, A. B., 1 lt. 8 cav., Jefferson Bks, Mo.
 Craig, H., jr., 1917 Chestnut st., Philadelphia.
 Craig, J. W., capt. 12 cav., Manila, P. I.
 Craig, M., capt. 10 cav., Ft. Leavenworth.
 Craighill, Wm. E., capt. eng., Mobile, Ala.
 Craigie, D. J., brig. gen. ret., Washington, D. C.
 Crane, Chas. J., lt. col. 8 inf., San Juan, P. R.
 Craycroft, Wm. T., 1 lt. ret., Dallas, Texas.
 Cress, Geo. O., capt. 4 cav., Orchard Lake, Mich.
 Crimmins, M. L., 1 lt. 19 inf., Ft. Leavenworth.
 Croft, E., capt. 2 inf., Ft. Logan, Col.
 Crosby, Herbert B., capt. 14 cav., Manila, P. I.
 Crowder, E. H., col. j. a., Washington, D. C.
 Crozier, Wm., brig. gen., Washington, D. C.
 Cruse, Thos., maj. Q. M. dept., St. Louis.
 Cullen, D., 1 lt. 8 cav., Ft. Assiniboine, Mont.
 Culver, C. C., 1 lt. 8 cav., Ft. Assiniboine, Mont.
 Cunningham, T. H., 2 lt. 8 cav., Jefferson Bks.
 Curry, W. L., capt., Columbus, O.
 Cusack, Joseph E., capt. 12 cav., Manila, P. I.
 Dade, A. L., capt. 13 cav., Manila, P. I.
 Dallam, S. F., capt. 5 cav., Ft. Huachuca, Ariz.
 Dalton, H. F., 1 lt. 6 inf., Ft. Leavenworth.
 Davidson, A. H., 1 lt. 13 cav., Manila, P. I.
 Davis, B. O., 2 lt. 10 cav., Ft. Washakie, Wyo.
 Davis, C. O., capt., Corsicana, Tex.
 Davis, E., 1 lt. 11 cav., Ft. Des Moines, Iowa.
 Davis, F. E., 2 lt. 8 cav., Jefferson Bks, Mo.
 Davis, G. B., brig. gen., Washington, D. C.
 Davis, Ira D., capt., Houston, Tex.
 Davis, M. F., capt. 1 cav., Ft. Leavenworth.
 Davis, Norman H., 2 lt. 14 cav., Manila, P. I.
 Davis, T. F., lt. col. 30 inf., Ft. Logan H. Roots, Ark.
 Davis, W., col. ret., The Albion, Baltimore, Md.
 Day, Clarence R., capt. 5 cav., Macon, Mo.
 Dean, W., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Degeu, J. A., 1 lt. 12 cav., Manila, P. I.
 Deltrick, L. L., 1 lt. 13 cav., Manila, P. I.
 Dickman, J. T., capt. 8 cav., Washington, D. C.
 Disque, B. P., 1 lt. 3 cav., Ft. Leavenworth.
 Dixon, V. D., 1 lt. 5 cav., Ft. Wingate, N. Mex.
 Dockery, A. B., lt. 5 cav., Ft. Wingate, N. M.
 Dodd, G. A., maj. 3 cav., Philadelphia.
 Dodge, C. C., gen., 10 E 76 St., New York.
 Dodge, Francis S., brig. gen., Washington, D. C.
 Dodge, T. A., capt. ret., New York City.
 Dolan, T. J., capt., 2021 Walnut st., Philadelphia.
 Donaldson, T. Q., capt. 8 cav., Ft. Sill, O. T.
 Donovan, A. E., vetn. art., Vancouver Bks.
 Dorcy, B. H., 1 lt. 4 cav., Jefferson Bks.
 Dorst, J. H., col. 3 cav., Ft. Assiniboine.
 Dougherty, C. A., 2 lt. 13 cav., Manila, P. I.
 Drake, C. B., capt. 14 cav., Manila, P. I.
 Dudley, Clark D., 1 lt. 14 cav., Manila, P. I.
 Duff, Robt. J., capt. 8 cav., Ft. Riley.
 Ducher, H. M., vetn., Peekskill, N. Y.
 Duvall, W. P., maj. art., Washington, D. C.
 Dyer, Ed. H., maj., Rutland, Vt.
 Early, Orson L., 2 lt. 8 cav., Ft. Riley.
 Eaton, W. R., lt. box 952, Denver, Col.
 Ederly, Winfield S., col. 2 cav., Manila, P. I.
 Edmunds, C. W., lt., 425 Walnut st., Philadelphia.
 Edwards, Frank A., maj. 4 cav., Rome, Italy.
 Edwards, Frank B., 1 lt. art., Ft. Hamilton.
 Edwards, Frank B., 1 lt. 7 cav., St. Paul, Minn.
 Edwards, W. W., 2 lt. 10 cav., Ft. Robinson, Neb.
 Elliott, S. H., capt. 11 cav., Ft. Des Moines, Ia.
 Ellis, R. B., 1 lt. 14 cav., Manila.
 Etinge, LeRoy, capt. 15 cav., Ft. Ethan Allen.
 Ely, E. J., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Ely, H. E., capt. 26 inf., Ft. Leavenworth.
 Engel, E., 2 lt. 9 cav., Ft. Walla Walla, Wash.
 English, E. G., 2 lt. 5 cav., Ft. Apache, Ariz.
 Enos, Copley, 2 lt. 1 cav., Ft. Sam Houston, Texas.
 Enslow, R. S., lt. 10 cav., Ft. Washakie, Wyo.
 Erwin, J. B., maj. 9 cav., Ft. Leavenworth.
 Estes, Geo. H., jr. capt. 20 inf., Manila, P. I.
 Esty, Thos. B., 2 lt. 9 cav., Three Rivers, Cal.
 Estes, H. L., lt., 1410 Jackson ave., New Orleans, La.
 Evans, E. W., capt. 8 cav., Jefferson Bks, Mo.
 Evans, Geo. H., capt. ret., Pittsburgh, Pa.
 Fair, John S., 1 lt. 9 cav., Ft. Leavenworth.
 Farber, Chas. W., capt. 8 cav., 513 Broadway, Albany, N. Y.
 Farmer, Chas. C., jr., 1 lt. 10 cav., Ft. Leavenworth.
 Farnsworth, Chas. S., capt. 7 inf., Manila, P. I.
 Farnum, F. H., 2 lt. 11 inf., Ft. D. A. Russell.
 Faulkner, A. U., 1 lt. art., Ft. Du Pont, Del.
 Fehet, Jas. E., 1 lt. 9 cav., Presidio San Francisco.
 Fenton, C. W., capt. paymr (cav.), Manila.
 Fisher, Ronald E., 2 lt. 14 cav., Manila.
 Fitch, Roger S., 1 lt. 1 cav., Ft. Leavenworth.
 Fleming, L. J., capt. Q. M., San Antonio, Tex.
 Fleming, R. J., capt. 20 cav., Ft. Robinson.
 Foerste, L., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Foltz, Fred S., capt. 2 cav., Manila, P. I.
 Fonda, Ferd. W., 1 lt. 10 cav., Ft. Mackenzie.
 Foose, S. M., capt. art., Ft. Myer, Va.
 Forbush, W. C., col. ret., The Markeen, 1291 Main St., Buffalo, N. Y.
 Foreman, Milton J., maj., 3412 Vernon Ave., Chicago.
 Forsyth, Jas. W., maj. gen. ret., Columbus, O.
 Forsyth, Wm. W., capt. 6 cav., Ft. Keogh, Mont.
 Fortescue, G. R., 1 lt. 10 cav., Washington.
 Foster, A. B., capt. 19 inf., Vancouver Bks.
 Foster, Fred W., maj. 5 cav., Whipple Bks, Ariz.
 Foster, Leo F., capt. art., Ft. Fremont, S. C.

- Fountain, S. W., lt. col. 4 cav., Jefferson Bks.
 Foy, Robert C., 1 lt. 1 cav., West Point, N. Y.
 Fraser, Walter, vet. 13 cav., Manila, P. I.
 Freeman, H. B., brig. gen. ret., Leavenworth.
 Fulle, C. J., capt., Salinas, Cal.
 Fuller, A. M., capt. 9 cav., Knoxville, Tenn.
 Fuller, Ezra B., maj., ret., Columbia, S. C.
 Funston, Fred., brig. gen., Chicago, Ill.
 Furlong, J. W., capt. 6 cav., Ft. Meade, S. D.
 Galbraith, J. G., maj. 1 cav., Des Moines, Ia.
 Gale, George H. G., maj. 1 g. d., Star Building,
 St. Louis.
 Gardenhire, W. C., 2 lt. 15 cav., Ft. Ethan
 Allen.
 Gardner, Edwin F., lt. col. ret., Holliston, Mass.
 Gardner, John H., capt. 2 cav., Manila, P. I.
 Garity, George, 1 lt. 2 cav., Gen. Hospital, Pres-
 idio, San Francisco.
 Garrard, Joseph, lt. col. 14 cav., Manila, P. I.
 Gaston, Joseph A., maj. 1 cav., Ft. Sam Hous-
 ton, Texas.
 Gatley, Geo. G., capt. art., Manila, P. I.
 Gaujot, Julien E., 1 lt. 11 cav., Ft. Des Moines
 Iowa.
 Gibbins, H., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Gillem, Alvan C., 1 lt. 4 cav., Jefferson Bks,
 Mo.
 Glasgow, Wm. J., capt. 13 cav., Manila, P. I.
 Gleaves, S. R., 1 lt. 1 cav., Ft. Clark, Tex.
 Godfrey, E. S., col. 9 cav., Ft. Riley, Kan.
 Godson, W. F. H., 1 lt. 10 cav., Ft. Robinson.
 Godwin, E. A., lt. col. 9 cav., San Francisco.
 Going, R. B., 1 lt. 15 cav., Ft. Ethan Allen.
 Goldman, H. J., capt. 5 cav., Ft. Apache, Ariz.
 Goodale, Geo. S., capt. 23 inf., Manila.
 Goode, George W., capt. 1 cav., Ft. Clark, Tex.
 Goodspeed, Nelson A., 2 lt. 3 cav., Ft. Assin-
 boine, Mont.
 Gordon, Geo. A., col. Savannah, Ga.
 Gordon, Wm. W., 2 lt. 2 cav., Manila, P. I.
 Gould, J. H., vetn. 11 cav., Ft. Riley, Kas.
 Graham, Alden M., 2 lt. 1 cav., Ft. Clark, Tex.
 Granger, R. S., 1 lt. art., Ft. Riley.
 Grant, Frederick D., brig. gen., New York.
 Grant, Walter S., 1 lt. 3 cav., St. Paul, Minn.
 Gray, Alonzo, capt. 14 cav., Manila, P. I.
 Greely, Adolphus W., brig. gen. chf. sig. off.,
 Washington, D. C.
 Gresham, John C., maj. 15 cav., Ft. Myer, Va.
 Grierson, B. H., brig. gen. ret., Jacksonville,
 Ill.
 Grierson, C. H., capt. 10 cav., Ft. Robinson.
 Griffith, F. D., jr., 2 lt. 6 cav., Ft. Meade, S. Dak.
 Griggs, Everett G., capt., Tacoma, Wash.
 Groome, J. C., capt., 1222 Walnut st., Phila-
 delphia, Pa.
 Gros, F. W., col., 142 Logan ave., Denver, Col.
 Grove, W. R., capt. sub. dept., Kansas City.
 Grunert, G., 2 lt. 11 cav., Ft. Sheridan, Ill.
 Grutzman, W. R., vetn. 15 cav., Ft. Myer, Va.
 Guest, John, capt. ret., 16 Revere, Atlantic
 City, N. J.
 Guilfoyle, J. E., maj. ml. sec., Manila, P. I.
 Halght, C. S., 1 lt. 4 cav., Ft. Leavenworth.
 Haldeman, Horace L., lt. col., Real Estate
 Bldg, Philadelphia, Pa.
 Hall, C. G., capt. 5 cav., Ft. Du Chesne, Utah.
 Hall, W. P., brig. gen., Washington, D. C.
 Hammond, Andrew G., maj. 3 cav., World's
 Fair Station, St. Louis.
 Hammond, C. L., 4627 Greenwood ave., Chicago.
 Hanna, M. E., capt. 3 cav., Ft. Assiniboine,
 Mont.
 Harbord, James G., capt. 11 cav., Manila, P. I.
 Hardeman, L., capt. 11 cav., Ft. Des Moines, Ia.
 Hardie, Francis H., maj. 14 cav., Manila, P. I.
 Hardin, E. E., maj. 7 inf., Manila, P. I.
 Harper, Roy B., capt. 3 cav., Ft. Assiniboine,
 Mont.
 Harris, E. R., 2 lt. 11 cav., Ft. Des Moines, Ia.
 Harris, F. W., capt. 4 cav., Vienna, Austria.
 Harris, Moses, maj. ret., New York City.
 Harrison, Ralph, capt. 2 cav., Manila, P. I.
 Hart, A. C., 1 lt. 10 cav., Ft. Robinson, Nebr.
 Hartman, J. D. L., capt. 1 cav., Ft. Leaven-
 worth.
 Harvey, Charles G., 1 lt. 2 cav., Manila, P. I.
 Hasson, John P., 1 lt. 6 cav., Ft. Meade, S. D.
 Hathaway, C. E., 2 lt. 9 cav., Wawona, Cal.
 Hawkins, Clyde E., capt. 2 cav., Manila, P. I.
 Hawkins, H. S., capt. sub. dept., Denver, Colo.
 Hay, W. H., capt. 10 cav., Ft. Robinson, Nebr.
 Hayden, John I., capt. art., San Francisco.
 Hayden, Ralph N., 2 lt. 7 cav., Camp Thomas.
 Hayne, Paul T., jr., 1 lt. 14 cav., Manila, P. I.
 Hazzard, Oliver P. M., 1 lt. 2 cav., Manila, P. I.
 Hazzard, Russell T., 1 lt. 1 cav., Ft. Clark, Tex.
 Heard, J. W., capt. 3 cav., Ft. Assiniboine.
 Heaton, Wilson G., 1 lt. 13 cav., Manila, P. I.
 Hedekin, C. A., capt. 3 cav., Ft. Apache, Ariz.
 Heiberg, E. K., capt. 6 cav., Ft. Meade, S. Dak.
 Heidt, Grayson V., 1 lt. 14 cav., Manila, P. I.
 Hein, O. L., lt. col. ret., Washington, D. C.
 Heintzelman, S., 1 lt. 6 cav., Ft. Leavenworth.
 Hemphill, J. E., 1 lt. sig. corps, Nome, Alaska.
 Hennessey, P. J., 2 lt. 5 cav., Ft. Huachuca.
 Henry, Guy V., capt. 12 cav., 117 58 st., N. Y.
 City.
 Henry, J. B., jr., 2 lt. 4 cav., Fort Leavenworth.
 Herman, Fred J., 1 lt. 9 cav., Wawona, Cal.
 Hero, W. S., lt., 622 Commercial Place, New
 Orleans, La.
 Herron, Joseph S., capt. 2 cav., Manila, P. I.
 Hershler, F. W., 1 lt. 4 cav., Ft. Leavenworth.
 Hickey, J. B., maj. 11 cav., 23 3d ave., N. Y.
 Hickman, E. A., 1 lt. 1 cav., Ft. Sam Houston,
 Tex.
 Hickok, H. R., capt. 15 cav., Ft. Myer, Va.
 Hilgard, M. R., 1 lt. 16 inf., Ft. McPherson, Ga.
 Hill, Wm. P., vetn. 12 cav., Manila, P. I.
 Hill, Zeph T., maj., Denver, Col.
 Hirsch, Harry J., capt. 20 inf., Manila, P. I.
 Hodges, H. L., 2 lt. 1 cav., Ft. Clark, Texas.
 Hodgson, P. G., maj. Q. M. D., Vancouver Bks.
 Hoff, J. V. R., lt. col. M. D., Ft. Leavenworth.
 Holabird, S. B., brig. gen. ret., Vineyard,
 Haven, Mass.
 Holbrook, L. R., capt. 5 cav., Ft. Leavenworth.
 Holbrook, W. A., capt. 5 cav., Whipple Bks.
 Holcomb, Freeborn P., 1 lt. 14 cav., Manila, P. I.
 Holliday, Milton G., 2 lt. 15 cav., Ft. Myer, Va.
 Hope, F. W., lt., Broad and Front sts., Red
 Bank, N. J.
 Hopkins, A. T., lt., Watertown, S. D.
 Hoppin, C. B., jr., 15 cav., Ft. Ethan Allen, Vt.
 Hornbrook, J. J., capt. 12 cav., Manila, P. I.
 Horton, W. E., capt. Q. M. D., Washington, D. C.
 Howard, H. P., capt. 14 cav., Manila, P. I.
 Howard, J. H., 2 lt. 9 cav., San Francisco.
 Howell, J. R., col., Bohemian Club, San Fran-
 cisco.
 Howze, R. L., capt. 6 cav., World's Fair Station,
 St. Louis.
 Hoyle, George S., maj. ret., Indian Spring.
 Hugbins, E. L., brig. gen. ret., Muskogee, I. T.
 Hughes, J. B., capt. 4 cav., Jefferson Bks, Mo.
 Hughes, Martin B., col. 1 cav., Ft. Clark, Tex.
 Hume, John K., 2 lt. 14 cav., Manila, P. I.
 Hunsaker, I. L., 2 lt. 3 cav., Ft. Apache, Ariz.
 Hunt, Levi P., maj. 13 cav., Washington.
 Hunter, G. K., maj. 6 cav., Ft. Meade, S. Dak.
 Hunt, Geo. G., col. ret., Carlisle, Pa.
 Huston, James, 1 lt. 10 cav., Washakie, Wyo.
 Hyde, A. P. S., 1 lt. art., Ft. Terry, N. Y.
 Hyer, B. B., capt. 13 cav., Manila, P. I.
 Ingerton, W. H., capt., Amarillo, Tex.
 Irons, J. A., maj. Insp. gen., Star Bldg., St.
 Louis, Mo.
 Jackson, Henry, brig. gen. ret., Leavenworth.
 Jackson, R. F., 1 lt. 3 cav., Washington Bks.
 Jacobs, Douglas H., 2 lt. 14 cav., Manila, P. I.
 Jeffers, S. L., 1 lt. 7 cav., Camp Thomas.
 Jenkins, J. M., capt. 5 cav., Ft. Huachuca, Ariz.
 Jennings, T. H., 2 lt. 7 cav., Ft. Myer, Va.
 Jervey, E. P., jr., capt. 10 cav., Oklahoma City.
 Jewell, Chas. H., vetn. 13 cav., Manila, P. I.
 Jewell, James M., 2 lt. 14 cav., Manila, P. I.
 Johnson, A., capt. 13 inf., Alcatraz Island, Cal.

- Johnson, C. P., capt. 10 cav., Ft. Robinson, Neb.
 Johnson, F. O., maj. 2 cav., Manila, P. I.
 Johnson, F. C., 1 lt. 2 cav., Manila, P. I.
 Johnson, H. B., 2 lt. 3 cav., Ft. Assinniboine.
 Johnston, G., 1 lt. sig. corps, Benicia Bks. Cal.
 Johnston, J. A., gen., 2111 Mass. ave., Wash-
 ington, D. C.
 Johnston, W. T., capt. 15 cav., Ft. Myer, Va.
 Jones, C. R., 273 S. Fourth st., Philadelphia.
 Jones, F. M., 1 lt. 9 cav., Wawona, Cal.
 Jones, S. G., capt. 11 cav., Ft. Des Moines, Ia.
 Jordau, H. B., 1 lt. O. D., Frankford, Pa.
 Joyce, K. A., 2 lt. 6 cav., Ft. Leavenworth.
 Jurich, A., jr., 2 lt. 4 cav., Jefferson Bks, Mo.
 Karnes, Wm. L., 1 lt. 6 cav., Omaha, Neb.
 Keller, Frank, 2 lt. 8 cav., Jefferson Bks, Mo.
 Kelly, Wm., 1 lt. engr., P. O. Bldg., New Lon-
 don, Conn.
 Kelly, W., jr., capt. 9 cav., West Point, N. Y.
 Kelly, William H., capt., 140 Glenway st.,
 Dorchester, Mass.
 Kendall, Henry F., maj. 12 cav., Washington.
 Kendall, Henry M., maj. ret., Soldiers' Home,
 Washington.
 Kennedy, W. B., maj. ret., Los Angeles, Cal.
 Kennington, Alfred E., capt. 7 cav., Camp
 Thomas, Ga.
 Kerr, James T., lt. col. a. g., Washington, D. C.
 Kerr, J. B., col. 12 cav., San Francisco, Cal.
 Kerth, Monroe C., capt. 23 inf., Manila, P. I.
 Ketcheson, J. C., Leavenworth, Kan.
 Keyes, Allen C., 2 lt. 14 cav., Manila, P. I.
 Keyes, E. A., 2 lt. 6 cav., 1970 3d st., San Diego,
 Cal.
 Kilbourne, Louis H., 2 lt. 8 cav., Ft. Sill, Okla.
 Kilian, Julius N., capt. sub. dept., 3d and Olive,
 St. Louis.
 Kimball, Gordon N., 1 lt. 12 cav., Manila, P. I.
 King, Albert A., 1 lt. 8 cav., Ft. Sill, Okla.
 King, Charles, brig. gen., Milwaukee, Wis.
 King, Ed L., capt. 2 cav., Colon, Panama.
 Kirkman, Hugh, 1 lt. 8 cav., Ft. Sill, Okla.
 Kirkpatrick, George W., capt. 15 cav., Ft.
 Ethan Allen, Vt.
 Kline, J., brig. gen. ret., Ft. Snelling, Minn.
 Knight, J. T., maj. qm. dept., Philadelphia.
 Knox, R. S., 1 lt. 24 inf., Ft. Missoula, Mont.
 Knox, Thomas M., 1 lt. 4 cav., Ft. Riley, Kas.
 Knox, T. T., col. ret., New York City.
 Kochersperger, S. M., capt. 2 cav., Manila, P. I.
 Koehler, L. M., capt. 4 cav., Ft. Leavenworth.
 Koester, F. J., capt. 15 cav., Ft. Myer, Va.
 Kramer, J. L., maj., Parkersburg, W. Va.
 Kramer, L. B., 1 lt. 11 cav., West Point, N. Y.
 Krumm, Herbert Z., 2 lt. 1 cav., Ft. Clark, Tex.
 Lacey, F. E., jr., capt. 1 inf., Ft. Wayne, Mich.
 Lahm, F. P., 2 lt. 6 cav., West Point.
 Lake, B. M., capt., Alcott P. O., Denver.
 Landis, J. F. R., capt. 1 cav., Ft. Clark, Tex.
 Langdon, J. G., 1st lt. art., Ft. Miley, Cal.
 Laughorne, G. T., capt. 11 cav., Manila, P. I.
 Lanza, C. H., capt. art. corps, Birmingham, Ala.
 Leach, S. S., maj. eng., Ft. Leavenworth.
 Lear, B., jr., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Leary, E. M., capt. 11 cav., Ft. Riley, Kan.
 Lebo, Thos C., col. 14 cav., Manila, P. I.
 Lechtman, C., col., Kansas City, Mo.
 Lee, Fitzhugh, brig. gen. ret., Richmond, Va.
 Lee, Fitzhugh, jr., 1 lt. 12 cav., Manila, P. I.
 Lee, Geo. M., 1 lt. 4 cav., Ft. Riley, Kan.
 Lee, J. M., brig. gen., San Antonio, Tex.
 Lesher, R. W., 2 lt. 3 cav., Ft. Yellowstone, Wyo.
 Lewis, C. R., lt. 28 inf., Manila.
 Lewis, J. H., 1 lt. 5 cav., Ft. Wingate, N. M.
 Lewis, LeRoy D., 2 lt. 4 cav., Ft. Riley, Kan.
 Lewis, T. J., capt. 2 cav., Louisville, Ky.
 Lincoln, James R., brig. gen., Ames, Iowa.
 Lindsey, J. R., capt. 15 cav., Ft. Ethan Allen.
 Lindsey, Elmer, capt. 1 cav., Ft. Clark, Tex.
 Linsinger, Clarence, 2 lt. 1 cav., Ft. Clark, Tex.
 Lippincott, Aubrey, 1 lt. 14th cav., Manila, P. I.
 Littlebrant, W. T., capt. 12 cav., Manila, P. I.
 Liverman, H. T., capt., Mansfield, Ia.
 Livermore, R. L., capt. 10 cav., Ft. Bayard, N. M.
 Lochridge, P. D., capt. 13 cav., Manila, P. I.
 Lockett, James, maj. 4 cav., Ft. Riley, Kan.
 Lockwood, J. A., capt. ret., 530 5th ave., N. Y.
 Logan, A. J., col., 119 3d ave., Pittsburg, Pa.
 Lomax, L. C., lt., Telluride, Col.
 Long, John D., 1 lt. 12 cav., Manila, P. I.
 Longstreet, Jas., jr., 1 lt. 13 cav., Manila, P. I.
 Lott, Abraham G., capt. 6 cav., Ft. Meade, S. D.
 Loud, John S., lt. col. ret., Washington, D. C.
 Love, Moss L., 2 lt. 2 cav., Manila, P. I.
 Love, Robt. R., 2 lt. 9 cav., Three Rivers, Cal.
 Lovell, Geo. E., 1 lt. 7 cav., Camp Thomas, Ga.
 Lowe, A. W., maj., 1 Olive st., Lynn, Mass.
 Lowe, Wilson, maj., Upper Alton, Ill.
 Lowe, Wm. L., 1 lt. 13 cav., Manila, P. I.
 Ludington, M. I., maj. gen. ret., Skaneateles,
 Onondaga Co., New York.
 Luedeka, E. C., lt., 245 Seminary ave., Chicago.
 Luhn, Wm. L., 1 lt. 11 cav., Ft. Riley, Kan.
 Lull, C. T. E., lt. art., Ft. Worden, Wash.
 Lusk, Wm. V., vetn. 2 cav., Manila, P. I.
 Lyon, C. A., col., Sherman, Texas.
 McAndrews, Jos. R., 1 lt. 1 cav., Ft. Sam Hous-
 ton, Tex.
 MacArthur, Arthur, maj. gen., San Francisco.
 Macklin, J. E., lt. col. 3 inf., Ft. Lisicum, Alaska.
 MacKinley, W. E. W., 1 lt. 1 cav., Washington,
 D. C.
 MacLeod, Norman, Lieut., North American
 Bldg., Philadelphia.
 McCabe, E. R. W., 2 lt. 6 cav., Ft. Keogh, Mont.
 McCain, Wm. A., 2 lt. 8 cav., Ft. Riley, Kas.
 McCarthy, D. E., maj. Q. M. D., Ft. Leavenworth.
 McCaskey, D. I., 4 cav., Ft. Leavenworth.
 McCaskey, Wm. S., brig. gen., Manila, P. I.
 McClelland, E. J., maj. a. g., St. Louis, Mo.
 McClintock, J., lt. 5 cav., Ft. Wingate, N. M.
 McClure, A. N., 1 lt. 5 cav., Ft. Duchesne, Utah.
 McClure, N. F., capt. 5 cav., Ft. Huachuca, Ariz.
 McCord, J. H., lt. col., St. Joseph, Mo.
 McCormick, L. S., maj. 7 cav., Ft. Leavenworth.
 McCormack, W. H., capt. 9 cav., Wawona, Cal.
 McCoy, Frank R., capt. 8 cav., Manila, P. I.
 McCrossin, E. J., 614 Nat. Bank Bldg., Birming-
 ham, Ala.
 MacDonald, A., vetn. 11 cav., Ft. Des Moines, Ia.
 MacDonald, G. H., capt. 1 cav., West Point.
 McDonald, J. B., capt. 3 cav., Ft. Assinniboine.
 McEnhill, Frank, 2 lt. 2 cav., Manila, P. I.
 McFadden, J. F., lt., 121 Chestnut st., Phila-
 delphia.
 McGee, Oscar A., 1 lt. 2 cav., Manila, P. I.
 McGonnigle, J. A., lt. Leavenworth, Kan.
 McKenney, Henry J., 1 lt. 14 cav., Manila, P. I.
 McKee, Will J., gen., Indianapolis.
 McKinley, James F., 1 lt. 14 cav., Manila, P. I.
 McLeer, J. C., lt., 475 Halsey st., Brooklyn.
 McMullen, J. I., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 McMurdo, C. D., vetn. 10 cav., Ft. Robinson.
 McNally, R. E., 1 lt. 3 cav., Ft. Yellowstone,
 Wyo.
 McNamee, M. M., capt. 15 cav., rectg. serv., 18
 Railroad Bldg., 1515 Larimer st., Denver.
 McNarney, F. T., 1 lt. 6 cav., Ft. Meade.
 Macomb, A. C., capt. 5 cav., Ft. Huachuca, Ariz.
 Macomb, M. M., maj. art. corps, Washington.
 Maize, Sidney D., 2 lt. 3 cav., Boise Bks, Idaho.
 Mangum, W. P., jr., 2 lt. 15 cav., Ft. Ethan
 Allen, Vt.
 Mann, H. E., 2 lt. 7 cav., Camp Thomas, Ga.
 Marshall, F. C., capt. 15 cav., West Point, N. Y.
 Martin, I. S., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Martin, J. W., lt., 1709 Walnut st., Philadelphia.
 Martin, W. F., 1 lt. 2 cav., Manila, P. I.
 Mason, Chas. W., maj. 4th inf., Manila, P. I.
 Maus, M. P., col. 20 inf., Manila, P. I.
 Mayo, Charles R., 2 lt. 12 cav., Manila, P. I.
 Meade, W. G., 2 lt. 11 cav., Ft. Riley, Kan.
 Mearns, Robert W., capt. 20 inf., Manila, P. I.
 Mears, Fred., 2 lt. 5 cav., Ft. Leavenworth.
 McGill, S. C., 2 lt. 8 cav., Jefferson Bks, Mo.
 Meltzer, C. F., lt., 1282 Wilcox ave., Chicago.
 Mercer, W. A., capt. 7 cav., Carlisle, Pa.
 Merritt, W., maj. gen. ret., Washington, D. C.

- Metcalf, W. S., gen., Lawrence, Kan.
 Meyer, Oren B., capt. 14 cav., Manila, P. I.
 Michle, R. E. L., capt. 12 cav., Manila, P. I.
 Miller, Alex. M., col. eng., Washington, D. C.
 Miller, A. M., jr., capt. 9 cav., Ft. Walla Walla.
 Miller, Archie, 1 lt. 6 cav., Ft. Keogh, Mont.
 Miller, E. L., 1 lt. 501 Madison ave., Albany.
 Miller, O., lt., 501 Russell ave., Cleveland, O.
 Miller, Troup, lt. 7 cav., Camp Thomas, Ga.
 Miller, Wm. H., lt. col., Q. M. dept., Chicago, Ill.
 Mills, Albert L., brig. gen., West Point, N. Y.
 Mills, A., brig. gen. ret., Washington, D. C.
 Mills, S. C., col. insp. gen. dept., Washington.
 Milton, A. M., 2 lt. 4 cav., Jefferson Barracks.
 Miner, C. W., gen. ret., The Chittenden, Columbus, Ohio.
 Mitchell, George E., capt. 13 cav., Manila, P. I.
 Mitchell, H. E., 2 lt. 3 cav., Boise Bks, Idaho.
 Moffet, Wm. P., 1 lt. 13 cav., 713 w. 19 st., Des Moines, Ia.
 Mohan, A. J., 2 lt. 4 cav., Jefferson Bks. Mo.
 Monohan, J. J., capt., West Chelmsford, Mass.
 Moore, Francis, brig. gen., San Francisco.
 Moore, J. A., lt. art. corps, Savannah, Ga.
 Morey, Lewis S., 1 lt. 12 cav., Manila, P. I.
 Morgan, G. H., maj. 9 cav., University of Minnesota, Minneapolis, Minn.
 Morgan, John M., capt. 12 cav., Manila, P. I.
 Morris, W. V., 1 lt. 6 cav., West Point, N. Y.
 Morrison, C. E., col., Parkersburg, W. Va.
 Morrison, G. L., lt. 5 cav., Ft. Apache, Ariz.
 Morrow, H. M., maj. J. a., San Francisco, Cal.
 Morrow, J. J., capt. eng., Washington, D. C.
 Morton, C., col. 7 cav., Ft. Myer, Va.
 Morton, C. E., 1 lt. 16 inf., Ft. Leavenworth.
 Moseley G. V. H., 1 lt. 1 cav., San Antonio, Tex.
 Moses, G. W., capt. pay dept., Kansas City, Mo.
 Moss, T. B., capt. art. corps, Paris, France.
 Mowry, P., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Mueller, Albert H., 2 lt. 8 cav., Ft. Riley, Kan.
 Mueller, R. W., capt., Milwaukee, Wis.
 Müller, C. H., 2 lt. 10 cav., Ft. Robinson, Neb.
 Mumma, Morton C., 1 lt. 2 cav., Manila, P. I.
 Munro, H. N., 2 lt. 1 cav., Ft. Sam Houston.
 Munro, J. N., capt. 3 cav., Ft. Assiniboine.
 Murphy, P. A., capt. 1 cav., Ft. Clark, Tex.
 Murphy, Will H., capt., Corsicana, Tex.
 Murray, C. H., maj. 4 cav., San Francisco, Cal.
 Myers, Hu B., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Nance, John T., capt. 9 cav., Presidio, San Francisco, Cal.
 Naylor, C. J., 2 lt. 4 cav., Jefferson Bks, Mo.
 Naylor, W. K., capt. 9 inf., Ft. Leavenworth.
 Nichols, Wm. A., maj. insp. gen'l dept., St. Louis, Mo.
 Nicholson, Wm. J., major 7 cavalry, Camp Thomas, Ga.
 Nissen, A. C., capt. 5 cav., Ft. Huachuca, Ariz.
 Noble, Robert H., capt. 3 inf., Manila, P. I.
 Nockolds C., vetn. 1 cav., Ft. Sam Houston, Tex.
 Nolan, D. E., capt. 30 inf., Washington, D. C.
 Nolan, Robert M., 1 lt. 1 cav., Ft. Clark, Tex.
 Norman, Wm. W., capt., 2 Punjab cav.
 Norton, Clifton R., 2 lt. 15 cav., Ft. Myer, Va.
 Norvell, Guy S., 1 lt. 8 cav., Jefferson Bks, Mo.
 Norvell, S. T., lt. col. ret., Tallahassee, Fla.
 Notmeyer, Wm. C., lt., Pierre, S. D.
 Noyes, Charles R., maj. 9 inf., Omaha, Neb.
 Noyes, Henry E., col. ret., 2018 Van Ness ave., San Francisco, Cal.
 Oakes, James, brig. gen. ret., care N. Holmes & Sons, Pittsburg, Pa.
 O'Connor, Charles M., maj. 11 cav., Manila, P. I.
 Odell A. S., 1 lt. 11 cav., Ft. Riley.
 Oden, G. J., 1 lt. 10 cav., Ft. Mackenzie, Wyo.
 Offley, Edward M., 2 lt. 12 cav., Ft. Clark, Tex.
 Oliver, L. W., 1 lt. 8 cav., Ft. Riley, Kan.
 Oliver, Prince A., 2 lt. 8 cav., Ft. Apache, Ariz.
 Olmstead, E., North Broad st., Elizabeth, N. J.
 Orton, Edward P., capt. 2 cav., Manila, P. I.
 O'Shea, John, capt. 4 cav., Jefferson Bks, Mo.
 Otis, Frank L., 2 lt. 8 cav., Ft. Leavenworth.
 Ott, Frederick M., capt., Harrisburg, Pa.
 Overton, W. W., 2 lt. 15 cav., Ft. Ethan Allen.
 Paddock, G. H., lt. col. 5 cav., 194 s Clark st., Chicago, Ill.
 Page, Charles, brig. gen. ret., Baltimore, Md.
 Paine, Wm. H., capt. 7 cav., Ft. Leavenworth.
 Palmer, B., 1 lt. 10 cav., Ft. Robinson, Neb.
 Palmer, H. W., lt., 2711 Prospect st., Tacoma.
 Parker, C. J., jr., lt., 765 Broad st., Newark, N. J.
 Parker, Dexter Wm., Meriden, Conn.
 Parker, F. Le J., capt. 12 cav., Manila, P. I.
 Parker, James, lt. col. adj. gen'l's dept., Star bldg., St. Louis, Mo.
 Parker, J. S., capt. 10 cav., Ft. Mackenzie, Wyo.
 Parker, Samuel D., 50 State st., Boston, Mass.
 Parsons, L., capt. 8 cav., Fayetteville, Ark.
 Patterson, W. L., 1 lt. Porto Rico regt., Cayce.
 Pattison, H. H., capt. 3 cav., Ft. Assiniboine.
 Paxton, R. G., capt. 10 cav., Ft. Robinson, Neb.
 Pearson, D. C., lt. col. 7 cav., Camp Thomas, Ga.
 Pearson, S. B., 1 lt. 9 cav., Three Rivers, Cal.
 Penn, Julius A., capt. 7 inf., Manila, P. I.
 Penfield, W. G., lt. ord. dept., Watertown Arsenal, Watertown, Mass.
 Perkins, A. S., 1 lt. 1 cav., Ft. Clark, Texas.
 Perkins, Chas. E., capt., Nogales, Arizona.
 Perrins, Wm. A., maj., box 7, Roxbury, Mass.
 Perry, Alex. W., capt. 1 cav., Ft. Des Moines.
 Perry, Oran, gen., Indianapolis.
 Pershing, J. J., capt. 15 cav., Oklahoma City.
 Pershing, W. B., 1 lt. 4 cav., Ft. Riley, Kan.
 Phillips, Ervin L., capt. 13 cav., Manila, P. I.
 Plicher, W., 1 lt. 9 cav., Ft. Bayard, N. M.
 Picher, J., maj. 6 cav., Ft. Yellowstone, Wyo.
 Place, Olney, 2 lt. 6 cav., Ft. Meade, S. D.
 Plummer, E. H., m. j. 3 inf., Ft. Egbert, Alaska.
 Poillon, Arthur, 1 lt. 14 cav., Manila, P. I.
 Pond, G. E., col. Q. M. dept., Washington, D. C.
 Poore, Benj. A., capt. 6 inf., Ft. Leavenworth.
 Pope, Francis H., capt. 14 cav., Manila, P. I.
 Pope, Wm. R., 2 lt. 2 cav., Manila, P. I.
 Power, E. L., capt., Lebanon, Ore.
 Powers, Robert B., capt. 7 cav., Camp Thomas.
 Pratt, Richard H., brig. gen., Bemuspoint, N. Y.
 Prentice, J., 2 lt. art. corps, Fremont, S. C.
 Price, G. E., 2 lt. 10 cav., Ft. Robinson, Neb.
 Prichard, G. B., jr., capt. 5 cav., Ft. Huachuca.
 Purington, G. A., 1 lt. 8 cav., Ft. Sill, Okla.
 Purviance, S. A., 1 lt. 4 cav., Ft. Leavenworth.
 Quinnlan, D. P., lt. 9 cav., Hollywood, Cal.
 Ramsey, Frank De W., capt. 9 inf., 21 Jackson Place, Washington, D. C.
 Randolph, H. M., maj., Denver, Col.
 Randolph, W. F., maj. gen. ret., Washington.
 Rankin, R. C., maj., Las Vegas, New Mex.
 Rawie, James, lt., Bryn Mawr, Pa.
 Rawie, Wm. B., lt. col., 211 S. 6 st., Philadelphia.
 Raymond, J. C., capt. 2 cav., Ft. Meade, S. D.
 Rayson, M. C., 1 lt. 5 cav., Ft. Apache, Ariz.
 Read, B. A., 1 lt. 6 cav., Ft. Meade, S. Dak.
 Read, G. W., capt. 9 cav., Washington, D. C.
 Read, John H., jr., 2 lt. 14 cav., Manila, P. I.
 Read, R. D., jr., maj. 10 cav., Ft. Mackenzie.
 Reaney, R. J., 1 lt. 2 cav., Manila, P. I.
 Reed, Wm. O., 1 lt. 6 cav., World's Fair, St. Louis.
 Reeves, Jas. H., capt. 14 cav., Manila, P. I.
 Remington, F., 301 Webster ave., New Rochelle, New York.
 Renziehausen, W. B., lt. 4 cav., Jefferson Bks, Mo.
 Rethorst, Otto W., 1 lt. 8 cav., Ft. Sill, Okla.
 Reynolds, Robt. W., 2 lt. 13 cav., Manila, P. I.
 Rhea, J. C., 1 lt. 7 cav., Camp Thomas, Ga.
 Rhodes, A. L., 2 lt. art. corps, Ft. Strong, Mass.
 Rhodes, C. D., capt. 6 cav., Washington, D. C.
 Rice, S., capt. 3 cav., Ft. Assiniboine, Mont.
 Rich, A. T., 2 lt. 26 inf., Ft. Sam Houston, Tex.
 Richard, J. J., capt., 28 Walling st., Providence, R. I.
 Richmond, H. S., capt., 717 Madison ave., Albany, N. Y.
 Ridgway, T., capt. art. Ft. Snelling, Minn.
 Riggs, Kerr T., 2 lt. 11 cav., Manila, P. I.
 Righter, J. C., jr., 1 lt. 4 cav., Ft. Leavenworth.
 Ripley, Henry L., maj. 8 cav., Ft. Sill, Okla.

- Ripple, Ezra H., Scranton, Pa.
 Rivers, T. R., capt. 4 cav., Ft. Leavenworth.
 Rivers, Wm. C., capt. 1 cav., Manila, P. I.
 Robe, Chas. F., brig. gen. ret., San Diego, Cal.
 Roberts, Hugh A., 1 lt. 8 cav., Ft. Riley.
 Roberts, T. A., capt. 7 cav., Camp Thomas, Ga.
 Roberts, Wm. M., 1 lt. M. D., Ft. Sill, Okla.
 Robertson, S. W., 2 lt. 15 cav., Ft. Ethan Allen.
 Rockenbach, S. D., capt. 12 cav., Manila, P. I.
 Rockwell, V. LaS., 1 lt. 11 cav., Ft. Des Moines.
 Rodgers, A., lt. col. 15 cav., Ft. Ethan Allen, Vt.
 Rodney, D. R., 2 lt. 5 cav., Ft. Apache, Ariz.
 Rodney, G. B., 1 lt. 5 cav., Ft. Apache, Ariz.
 Rodney, W. H., 2 lt. 1 cav., Ft. Clark, Tex.
 Roe, C. F., maj. gen., 280 Broadway, N. Y.
 Roome, B. R., lt., Pier 32 New E River, N. Y.
 Roscoe, David L., 2 lt. 1 cav., Ft. Clark, Tex.
 Rosenbaum, O. B., capt. 26 inf., Ft. Sam Houston, Tex.
 Ross, J. O., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Rothwell, T. A., 2 lt. 5 cav., Ft. Duchesne.
 Roudiez, Leon S., capt. q. m. dept., Ft. Riley, Kan.
 Rowan, H., maj. art., Ft. Terry, N. Y.
 Rowell, M. W., capt. 11 cav., Manila, P. I.
 Rucker, Louis H., brig. gen. ret., Los Angeles.
 Ruggles, F. A., 2 lt. 9 cav., Ft. Myer, Va.
 Ruh en G., lt. col. Q. M., Washington, D. C.
 Russell, E. K., maj. ret., Philadelphia.
 Russell, F. W., lt., Plymouth, N. H.
 Russell, Geo. M., 2 lt. 14 cav., Manila, P. I.
 Russell, G., maj. ret., Albany Hotel, Denver.
 Rutherford, S. McF., capt. 4 cav., Ft. Riley.
 Ryan, James A., capt. 15 cav., Ft. Myer, Va.
 Ryan, John P., capt. 6 cav., Ft. Leavenworth.
 Ryan, T. E., 1 lt. 11 cav., Ft. Leavenworth.
 Sands, G. H., capt. 6 cav., Ft. Meade, S. Dak.
 Sargent, H. H., capt. 2 cav., College Sta., Tex.
 Sawtelle, C. G., jr., capt. 3 cav., Jefferson Bks.
 Saxton, Albert E., capt. 8 cav., Jefferson Bks.
 Sayre, Farrand, capt. 3 cav., Ft. Leavenworth.
 Sayre, R. H., lt. 9 E 40 st., New York.
 Schenck, A. D., lt. col. art. corps, Ft. Stevens, Oregon.
 Scherer, L. C., capt. 4 cav., Washington, D. C.
 Schermerhorn, F. E., capt., 1420 Chestnut st., Philadelphia.
 Schofield, R. MCA, capt. Q. M. D., St. Paul.
 Schroeter, A. H., 1 lt. 1 cav., Ft. Sam Houston, Texas.
 Schultz, Theo., 1 lt. 14 cav., Manila, P. I.
 Schuyler, Walter S., lt. col. 2 cav., Manila, P. I.
 Schwan, Theo., brig. gen. ret., 16 Aberdeen, St. Paul, Minn.
 Schwarkopf, Olof, vetn. 3 cav., Ft. Assiniboine, Mont.
 Scott, Geo. L., maj. 10 cav., Onigum, Minn.
 Scott, Hugh L., maj. 11 cav., Manila, P. I.
 Scott, W. J., 1 lt. 10 cav., Ft. Robinson, Neb.
 Scott, W. S., capt. 1 cav., constabulary, Manila.
 Scott, W. S., capt. Q. M. D., Cheyenne, Wyo.
 Seoane, C. A., 1 lt. 3 cav., Ft. Yellowstone, Wyo.
 Service, S. W., vetn. 10 cav., Ft. Mackenzil, Wyo.
 Sharpe, H. G., col. sub. dept., Washington, D. C.
 Sheldon, R., lt. 23 inf., Manila, P. I.
 Shelley, J. E., 1 lt. 11 cav., Ft. Sheridan, Ill.
 Sheridan, M. V., brig. gen. ret., Carlisle, Pa.
 Sheridan, P. H., 2 lt. 5 cav., Ft. Huachuca.
 Shauk, Wm. A., maj. 8 cav., Delafield, Wis.
 Sibley, F. W., maj. 2 cav., Manila, P. I.
 Sichel, H. G., maj. 12 cav., Manila, P. I.
 Sidman, F. E., 2 lt. 8 cav., Ft. Sill, Okla.
 Stevert, H. A., capt. 9 cav., Ft. Leavenworth.
 Sillman, Robt. H., 1 lt. 15 inf., Monter-y, Cal.
 Sills, William G., capt. 1 cav., Ft. Sam Houston, Tex.
 Simms, C. W., col., Ronceverte, Greenbrier Co., W. Virginia.
 Simpson, W. L., capt. 6 inf., Ft. Leavenworth.
 Simpson, W. S., capt., Bovina, Texas.
 Sirmyer, Edgar A., capt. 8 cav., Ft. Riley, Kan.
 Slavens, T. H., capt. Q. M. D., Washington.
 Slocum, H. J., maj. 2 cav., Manila, P. I.
 Slocum, S. L'H., capt. 8 cav., Jefferson Bks, Mo.
 Smalley, Howard R., 2 lt. 2 cav., Manila, P. I.
 Smedberg, Wm. R., maj. ret., San Francisco.
 Smedberg, W. R., jr., capt. 14 cav., Manila, P. I.
 Smith, A. L., lt. col. sub. dep., St. Louis, Mo.
 Smith, Cornelius C., capt. 14 cav., Manila, P. I.
 Smith, Frederick McC., lt. art. corps, Ft. Williams, Me.
 Smith, Gilbert C., 1 lt. 2 cav., Manila, P. I.
 Smith, Harry R., col., Clarksburg, W. Va.
 Smith, M. C., capt. 14 cav., Manila, P. I.
 Smith, R. M., 1 lt. Philippine scouts, Manila.
 Smith, Selwyn D., 1 lt. 5 cav., Ft. Apache, Ariz.
 Smith, Talbot, 2 lt. 8 cav., Ft. Riley, Kan.
 Smith, Walter D., 2 lt. 11 cav., Ft. Des Moines.
 Smith, Walter H., 2 lt. 13 cav., Manila, P. I.
 Somerville, Geo. R., 2 lt. 14 cav., Manila, P. I.
 Sproule, Wm. A., vetn. art., Ft. D. A. Russell.
 Stanciliff, Ray J., vetn. 8 cav., Jefferson Bks.
 Starr, C. G., maj. inf., Manila, P. I.
 Stedman, C. A., col. 5 cav., Ft. Huachuca, Ariz.
 Steele, Matt. F., capt. 6 cav., Ft. Leavenworth.
 Steever, Edgar Z., col. 4 cav., Ft. Riley, Kan.
 Sterling, E. K., 2 lt. 3 cav., Ft. Assiniboine.
 Sterrett, R., 1 lt. 9 cav., Ft. Walla Walla, Wash.
 Steunenburg, Geo., 1 lt. 13 cav., Manila, P. I.
 Stevens, Chas. J., capt. 2 cav., Manila, P. I.
 Stevenson, Wm. L., 2 lt. 11 cav., Jefferson Bks.
 Stewart, Cecil, capt. 4 cav., Portland, Oreg.
 Stewart, C. W., lt. 5 cav., Ft. Huachuca, Ariz.
 Stewart, T. J., brig. gen., Harrisburg, Pa.
 Stiles, J. C., com. nav. bat., Brunswick, Ga.
 Stockle, Geo. E., capt. 8 cav., Jefferson Bks.
 Stodter, C. E., capt. 8 cav., Ft. Walla Walla.
 Stodford, F. W., 1 lt. art., Ft. Monroe, Va.
 Stott, Clarence A., 2 lt. 12 cav., Manila, P. I.
 Straub, Oscar L., capt. art., Ft. Leavenworth.
 Strong, F. S., capt. art., Ft. Barrancas, Fla.
 Strong, G., capt., 108 Dearborn st., Chicago.
 Stricker, Goss L., 2 lt. 6th cav., Ft. Meade, S. D.
 Sturges, Dexter, 1 lt. 13 cav., Manila, P. I.
 Sturges, Edw. A., 1 lt. 5 cav., Ft. Apache, Ariz.
 Sues, Geo. W., capt., 4128 Ellis ave., Chicago, Illinois.
 Sumner, S. S., maj. gen., Oklahoma City, Okla.
 Suplee, E. M., capt. 14 cav., Davenport, Ia.
 Swezey, C. B., capt. 13 cav., Manila, P. I.
 Swift, Eben, maj. 12 cav., Ft. Leavenworth.
 Swift, Eben, jr., 1 lt. 11 cav., Ft. Leavenworth.
 Swigert, Samuel M., col. ret., San Francisco.
 Symbion, John, 2 lt. 11 cav., Ft. Riley, Kan.
 Tate, Daniel L., capt. 3 cav., Boise Bks., Idaho.
 Tatum, H. C., 2 lt. 7th cav., Camp Thomas, Ga.
 Taulbee, Joseph F., 2 lt. 2 cav., Manila, P. I.
 Taulbee, M. K., 1 lt. P. R., Cayey.
 Taylor, C. W., maj. 13 cav., St. Paul, Minn.
 Taylor, T. B., 1 lt. 11 cav., Jefferson Bks., Mo.
 Taylor, W. R., 1 lt. 3 cav., Ft. Assiniboine.
 Tempamy, J., vetn. 9 cav., Ft. Walla Walla.
 Terrell, H. S., 1 lt. 10 cav., Ft. Mackenzie, Wyo.
 Thayer, Arthur, capt. 3 cav., World's Fair, St. Louis.
 Thomas, C. O., jr., 1 lt. 1 cav., Manila, P. I.
 Thomas, Earl D., col. 11 cav., Ft. Des Moines.
 Thurston, N. B., lt. col., 176 W. 87th st., N. Y.
 Tilford, J. D., 1 lt. 1 cav., Ft. Leavenworth.
 Tompkins, C. H., brig. gen. ret., Ebbitt House, Washington, D. C.
 Tompkins, D. D., 2 lt. 10 cav., Ft. Mackenzie.
 Tompkins, E. R., 1 lt. 11 cav., Jefferson Bks.
 Tompkins, F., capt. 11 cav., Ft. Des Moines.
 Towar, Albert S., col. pay dept., Chicago.
 Towles, Churchill, maj., Houston, Tex.
 Townsend, C. C., capt., Greeley, Col.
 Townsend, P. C., Corsicana, Tex.
 Townshend, Orval P., capt. P. R., Cayey.
 Traub, Peter E., capt. 5 cav., Ft. Leavenworth.
 Treat, Chas. G., capt. art. corps, West Point.
 Tremaine, Wm. C., 1 lt. 15 cav., Ft. Myer, Va.
 Tripp, S. O., lt. col., Peoria, Ill.
 Trippe, P. E., capt. 12 cav., Richmond, Va.
 Trout, Harry G., capt. 2 cav., Manila, P. I.
 Troxel, Orlando C., 2 lt. 12 cav., Manila, P. I.
 Tucker, W. F., lt. col. pay dept., Manila, P. I.
 Turner, Fred. G., 1 lt. 6 cav., Ft. Meade, S. Dak.

- Turnbull, W., 1 lt. M. D., Ft. Strong, Mass.
 Tuthill, A. M., capt., Morenci, Ariz.
 Tyner, Geo. P., 1 lt. 2 cav., Manila, P. I.
 Uri, J. H., vetn. 6 cav., Ft. Meade, S. D.
 Valentine, Wm. S., capt. 5 cav., Ft. Wingate.
 Valliant, R. D., 2 lt. 3 cav., Ft. Yellowstone.
 Van Deusen, G. W., capt. art., Manila.
 Van Leer, S., 1 lt. 15 cav., Ft. Myer, Va.
 Van Natta, T. F., jr., 2 lt. 8 cav., Fort Sill, O. T.
 Vans Agnew, R. S., vet. 5 cav., Ft. Apache, Ariz.
 Van Voorhis, D., 1 lt. 3 cav., Ft. Leavenworth.
 Varnum, C. A., maj. 9 cav., Ft. Riley, Kan.
 Vestal, S. P., capt. 7 cav., Silver City, N. M.
 Vidmer, Geo., capt. 11 cav., World's Fair Station, St. Louis.
 Viele, C. D., col. ret., Los Angeles, Cal.
 Vierra, F. M., lt., Salinas, Cal.
 Vroom, P. D., brig. gen. ret., care Hdqrs, San Francisco.
 Wade, James F., maj. gen., Governor's Island.
 Wade, John P., capt. 2 cav., Manila, P. I.
 Wagner, A. L., col. a. g. dept., 22 Jackson Place, Washington, D. C.
 Wagner, H., lt. col. ret., 201 W. 43 st., N. Y. City.
 Waite, H. De H., 1 lt. ret., Berkeley, Cal.
 Walcutt, Chas. C., jr., capt. (cav.) qm. dept., Prescott, Ariz.
 Waldo, Rhineland, 1 lt. 17 inf., Manila, P. I.
 Walker, K. W., capt. 15 cav., Ft. Myer, Va.
 Walker, Kirby, capt. 14 cav., Manila, P. I.
 Walker, R. W., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Wallach, R. R., 1 lt. 3 cav., Ft. Assiniboine.
 Walsh, R. D., capt. 9 cav., Ft. Leavenworth.
 Wampold, L., capt., cor. Market and Jackson st., Chicago.
 Warburton, C. E., capt., 704 Chestnut st., Philadelphia.
 Ward, E. M., capt., 43 South street, New York.
 Ward, F. K., lt. col. 1 cav., Ft. Clark, Tex.
 Warren, Rawson, 2 lt. 11 cav., Ft. Sheridan.
 Wassell, Wm. H., capt. 22 inf., Manila, P. I.
 Waterman, John C., capt. 7 cav., Grand Rapids.
 Watrous, J. A., maj. pay dept., Omaha, Neb.
 Watson, Jas. W., capt. 10 cav., New Orleans.
 Watson, J., 1 lt. 8 cav., Jefferson Bks, Mo.
 Watts, C. H., maj. 5 cav., Ft. Huachuca, Ariz.
 Watts, A. B., brig. gen. ret., Geneva, N. Y.
 Wells, B., capt., Telluride, Col.
 Wesendorff, Max, capt. ret., Elizabeth, N. J.
 Wesson, Chas. M., 1 lt. 8 cav., West Point.
 West, Chas., lt. col., Enid, Okla.
 West, E. S., 1 lt. 7 cav., Chickamauga Park, Ga.
 West, F., lt. col., Insp. gen., Oklahoma City.
 West, P. W., capt. 11 cav., San Francisco.
 Westmoreland, Wade H., 2 lt. 11 cav., Fort Riley.
 Wetmore, W. B., maj., Allenhurst, N. J.
 Weibrecht, Chas., lt. col., Alliance, O.
 Weyrauch, Paul H., 2 lt. 14 cav., Manila, P. I.
 Wheatley, Wm. F., 2 lt. 5 cav., Whipple Bks.
 Wheeler, Fred, maj. ret., Boston, Mass.
 Wheeler, H. W., maj. 11 cav., Ft. Sheridan.
 Whigam, W. H., capt., 38 Loomis st., Chicago.
 White, Geo. P., capt. (cav.) qm. dept., Presidio, San Francisco.
 White, H. A., capt. 11 cav., Ft. Leavenworth.
 Whitehead, H. C., capt. 10 cav., Ft. Robinson.
 Whitesides, J. G., lt., 3rd floor Keith Bldg, Philadelphia, Pa.
 Whitlock, F. O., 1 lt. 14 cav., West Point.
 Whitman, W. M., capt. 13 cav., Manila, P. I.
 Whiteside, S. M., brig. gen. ret., Station A, Washington, D. C.
 Whiteside, W. W., 1 lt. 15 cav., Ft. Myer, Va.
 Wieman, Henry, 176 Grove st., Brooklyn, N. Y.
 Wilen, John W., 1 lt. 13 cav., Manila, P. I.
 Williams, A. E., capt. 3 cav., Ft. Apache, Ariz.
 Williard, Harry O., capt. 5 cav., 16th and - Dodge sts., Omaha, Neb.
 Willis, H. S., lt., 86 Allen st., Albany.
 Wilson, J. C., maj., 141 22d st., Chicago, Ill.
 Wilson, James H., brig. gen. ret., 1835 Rodney ave., Wilmington, Del.
 Winans, E. B., jr., capt. 4 cav., Ft. Riley, Kan.
 Windsor, Henry, jr., Revere Copper Co., Boston, Mass.
 Winfree, S. W., 2 lt. 9 cav., Wawona, Cal.
 Winham, F. W., capt., Salinas, Cal.
 Winn, John S., capt. 2 cav., Manila, P. I.
 Winnia, C. C., 1 lt. 5 cav., Ft. Huachuca.
 Wint, Theodore J., brig. gen., Omaha, Neb.
 Winter, J. G., jr., 2 lt. 6 cav., Ft. Meade, S. Dak.
 Winter, M. A., col., 339 Pennsylvania ave., Washington, D. C.
 Winterburn, G. W., 1 lt. 9 cav., Three Rivers, Cal.
 Winters, Wm. H., 1 lt. 13 cav., Manila, P. I.
 Wise, H. D., capt. 9 inf., Madison Bks, N. Y.
 Wisser, J. P., maj. coast art., Ft. Miley, Cal.
 Wood, Edward E., col., West Point, N. Y.
 Wood, John P., lt., 521i N 22d st., Philadelphia.
 Wood, Leonard, maj. gen., Manila, P. I.
 Wood, Robert E., 1 lt. 3 cav., West Point, N. Y.
 Wood, Thomas J., brig. gen. ret. (maj. gen.), 121 N. Main st., Dayton, Ohio.
 Woodruff, Carle A., gen. ret., Raleigh, N. C.
 Woodruff, Charles A., brig. gen. ret., 2802 Van Ness ave., San Francisco, Cal.
 Woodruff, Wm. S., 1 lt. Porto Rico regt., Cayey.
 Woodward, Samuel L., brig. gen. ret., Clemens ave., St. Louis, Mo.
 Wotherspoon, W. W., lt. col. 14 inf., Washington, D. C.
 Woude, A. J., 1 lt. 6 cav., Ft. Keogh, Mont.
 Wright, E. S., capt. 1 cav., Ft. Clark, Tex.
 Wright, Wm. R., lt. 71 Leonard st., New York.
 Yates, A. W., capt. qm. dept., Portland, Me.
 Yates, Wm., capt. 14 cav., Laramie, Wyo.
 Young, E. C., col., Chicago.
 Young, Samuel B. M., lt. gen. ret., 25 E 60th st., New York City.
 Zane, Edmund L., 2 lt. 14 cav., Manila, P. I.
 Zell, Edward M., 2 lt. 7 cav., Ft. Myer, Va.
 Ziun, George A., maj. eng., Wheeling, W. Va.

 **Publisher's Notices.** 

AN AMERICAN PRODUCT SCORES ANOTHER GREAT VICTORY
IN GERMANY.

Prof. Dr. Lintner, director of the "Scientific Station for the Brewing Industry of Bavaria at Munich," upon analyzing "Pilsner Urquell," the beers of the "Buergerliches Brauhaus" of Pilsen, Bohemia, and "Anheuser-Busch's Budweiser," under date of May 17, 1904, makes the following statement sworn to before Dr. Pundter, Royal Notary, and verified by Hon. James H. Worman, U. S. Consul-General at Munich, Bavaria:

"Upon subjecting the several beers to a careful analysis I find that the 'Budweiser Beer,' submitted by the Anheuser-Busch Brewing Ass'n, St. Louis, U. S. A., is very similar in all its characteristics to the finest and best Pilsner beers. It is effervescent, clear and sparkling, has a beautiful creamy foam, and is possessed of a pure, wholesome taste and an exquisite hop flavor. Its keeping qualities by far exceed those of the Pilsner beers, resulting from the use of the very best materials in brewing, and the thorough maturity of the product. The analysis further shows that no acids or other preservatives have been used in its production, and as a result of my examination I pronounce 'Budweiser' a well matured bottled beer of the highest quality."

This acknowledgment, coming as it does from the recognized headquarters of the brewing industry of the old world, must be a great source of gratification and in a measure a compensation to the Anheuser-Busch people for their unceasing efforts to produce the finest beer that can be made.

"THE SOUTHWEST LIMITED."

One of the few railroad companies that owns and operates the sleeping cars in service on its lines, is the Chicago, Mil-

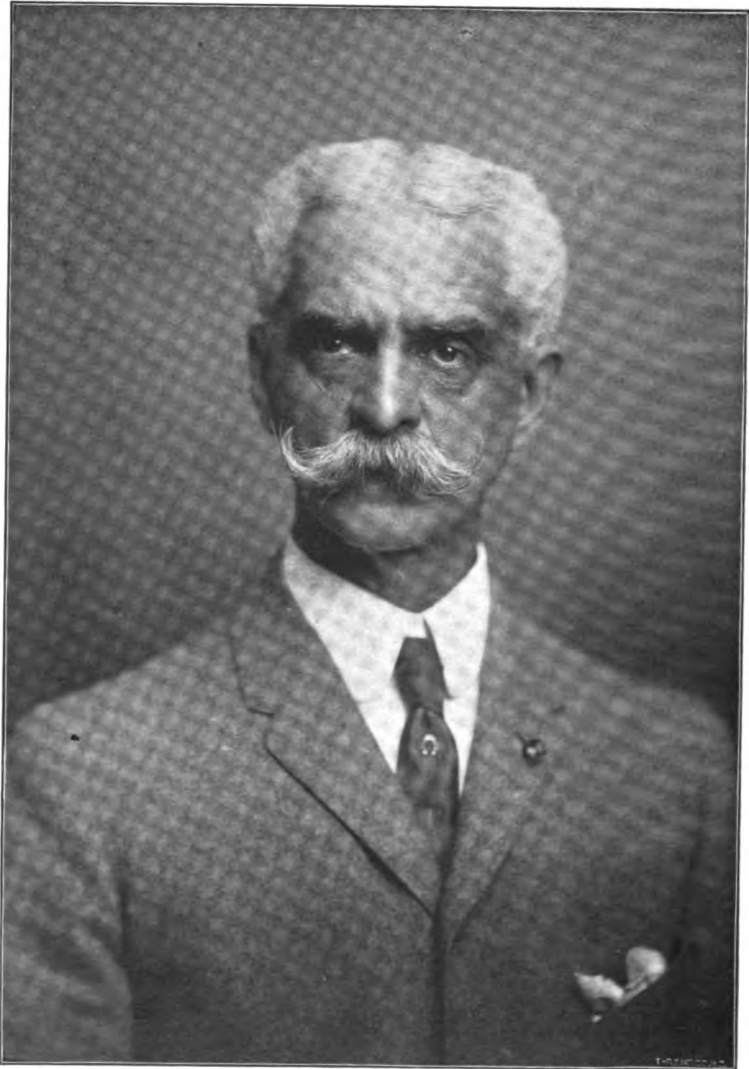
waukee & St. Paul. The sleeping cars on this line were formerly Pullman cars, operated by the Pullman company, but for a dozen years past the railway company has owned and operated the sleeping car equipment. In building its sleeping cars, a departure from the old standard pattern of cars has been made to the extent of adding about six inches to the width and height of the sleepers. This permits of wider and higher berths. Length has also been added to the berths, so that comfort is found in them which is lacking in ordinary sleeping cars. These large cars are in service on practically all of the lines of the St. Paul Road, and are very popular with the traveling public.

“ANDERSON RYE.”

The E. L. Anderson Distilling Company, of Newport, Kentucky, belongs to the best known line of distilling companies in the country. Its product is so well and favorably known among connoisseurs that anything we may say in its favor would not add to the reputation it has so widely attained. “Anderson” needs no introduction from the JOURNAL to army men. They know a good article when they taste it, and that is why it is so popular among them. A glance over the company's announcement in our advertising department will give the JOURNAL readers an opportunity to ascertain how reasonable their goods can be obtained. They certainly deserve a trial.

“POLISHINE.”

With its well earned reputation for *greatness and modesty*, we may be excused for calling to the attention of a discriminating public the words of the immortal Shakespeare, who wrote or said: “*Ay, there's the rub.*” Of course, he referred to “Polishine,” with which it is *so easy* to clean and polish all metals, etc., in just “one-half the time” with “just one-half the labor,” and but “one-half the quantity” required in using other brands. Later he added: “What fools these mortals be” who fail to buy and use great “Polishine.”



Robert Shawcross

ASSISTANT SECRETARY OF WAR.





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PEACE TRAINING OF OFFICERS.

FROM REMARKS INTRODUCTORY TO THE COURSE IN MILITARY ART, AT THE
INFANTRY AND CAVALRY SCHOOL AND STAFF COLLEGE.

BY MAJOR EBEN SWIFT, INSTRUCTOR.

THIS day is a notable one in the history of Fort Leavenworth. From humble beginnings some twenty-three years ago, the school has passed through many changes, generally for the better, until now we have a class which comes from nearly every corps and regiment, each member bearing the certificate of his commanding officer that the best man is sent. The Staff Class also have won their places by the hardest kind of competition. To belong to such a representative body is a high honor. The best work, the greatest zeal and the most conscientious performance of duty are assured from the first. At last the old kindergarten has disappeared and in its place a military university has risen. For such an institution a great future should be assured, making use of the best experience of others, and not forgetting what we have ourselves learned.

This is an appropriate occasion to outline something of the course in the military art, explain the aids upon which

we will rely and point out the great objective which we wish to attain. So much of the methods are new, so flexible are our rules, and so broad is all military doctrine, that these matters must be approached with unusual care.

The idea of turning out trained soldiers from a university is, I know, ridiculed by many, who fail to see the analogy between other professions and our own. No one refuses to recognize the graduates of the schools of medicine, electricity, law, engineering and others, as competent in their professions, but it is natural to ask the question, "How can soldiers obtain the necessary practice in their profession, which in all peaceful arts is so easy to secure?" Inability to solve this question as wars became rare, caused the military art to fall behind other arts and led to some of the greatest failures in history. It was maintained that the theory alone could be learned in time of peace, so that when war actually did occur the armies found themselves overwhelmed with knowledge that was fine in peace but useless in war.

The Germans had their attention directed to this matter by their own misfortunes, and decided that if a school of war were not possible the next best thing was to make their peace training come as closely as practicable to the actual condition of war. Under the guidance of the greatest of modern generals, who in the years preceding his great successes was commonly called the "Schoolmaster," new methods of giving the practice were introduced in the schools and the army. Then after three successful wars in six years the old fallacy that "war alone teaches war" was dispelled. The chasm between practice and theory was bridged at last—an undertaking which was long supposed to be impossible in our profession, although easy in others. It cannot be said, however, that the world ceased to view the university soldier with surprise and suspicion. It is a part of the slow development of a great idea. From the club of primeval man to the magazine rifle of to-day the changes have not been rapid. The idea of a flank attack was as slow to dawn upon the human mind as the forging of metals was to be comprehended by the artisans. The art of issuing a field order to a large command

came more slowly than the steam engine and almost as late as the telephone.

The practical test of the new method wrought the third revolution in the art of war in one hundred years. Frederick the Great had inherited a ready-made army. It had been trained in time of peace to a high degree of proficiency without especial reference to its usefulness in war, but he found at once that he could march all round his enemies and strike where he pleased. His victories quickly proved him to be the greatest soldier of his time, and his army became the accepted model for the world. Military men of every nation made pilgrimages to his maneuver grounds at Potsdam, Spandau and Berlin, and sought eagerly for the slightest bit of information about his methods. A system of parade ground maneuvers, which leaves out of question the terrain, cannot fail to strike us as strange at this day. Frederick had only been dead twenty years, and his army still contained some of his best soldiers, when the Corsican captured his capital. A new master had come who knew the relation between the ground and the battle, a matter which had been ignored until then. This single idea developed by a man of wonderful mental and physical capacity placed the French nation at the front of the world. Then we began to follow blindly the ways of the French soldiers, adopted their words into our military vocabulary, and for fifty years studied Napoleon Bonaparte. Since the battles of Metz and Sedan we have turned again to the Prussians.

Our own military history, great as it has been, does not encourage us to ignore these lessons taught by foreigners.

A certain regiment on our frontier in the spring of 1861 contained about thirty-five officers. It was a good regiment and had been officered with great care. In a rather small way its experience had been great, for it had much active work chasing Indians over a great expanse of country. Within a few months, at least half of the officers of that regiment were generals of the line, and four of them were soon at the head of great armies. When it came to applying their previous knowledge to greater questions than came up at a frontier post or on an Indian scout, they found themselves

without experience, instruction or precedent. It was a year and a half before the troops which they organized and commanded were capable of really good work, notwithstanding all the aid that money, patriotism and ability could bring to help. At the present day the country will expect quicker work than that. It is absolutely necessary, now that modern methods are beginning to be developed all around us in the world, and when readiness for war is the first requisite of a great State.

Do not understand that I am holding before you the glittering prospects of rank that came to those officers in 1861. Such an occasion is not likely to occur again, and, in fact, it is a part of our work to make it still more remote. But in any emergency requiring a great army, a large number of staff officers of the rank and age of this very audience, would be required for all commands. The last hundred years have given such cases as a Gneisenau for a Blucher, a Moltke for a king, a Blumenthal for a prince, and, to take a better example from our republican form of government, a Koerner for a political chieftain. How much we ourselves owe to Von Steuben we will probably never tell. These are the kinds of places which Fort Leavenworth graduates will be called to fill.

As I have intimated, the early experience in the Civil War was a painful one. The first battles excited the risibilities of the world, and are said to have brought from the greatest soldier of the age the cynical remark, that he was not paying attention to the war in America, because he was not interested in the maneuvers of an armed mob. Whether true or not, that statement well expresses the common idea then held of our military efforts—an idea that was not dispelled for years. The sad experience of the first Bull Run was not improved nearly a year later when the battle of Shiloh showed every fault of raw troops, notwithstanding all the efforts at drill and discipline which had been applied by the best soldiers we had. Without entering into the disputed points concerning Shiloh, we cannot fail to agree on the facts, that one army passed several days forming line of battle within sight of the opposing camp, that a commanding general was not able to

bring up a command six miles away, and that at the close of a day of battle only about ten thousand out of more than eighty thousand who started in, were on the line of battle. The Army of the Potomac passed under the command of its fourth commander before the purposes, uses and organization of cavalry received attention. Artillery was not in a better condition. Such things appear strange to amateurs as well as to professional soldiers. But it is also strange that the magnificent Roman armies should have been fooled and ruined by the simple stratagems of Hannibal, or that the Grecian generals should have been confounded by the newness of the idea of a flank attack. A new idea in war is as slow to arrive as any other momentous event in the history of mankind.

Not the least of our sad experiences during the Civil War was the fact, that many excellent officers were ruined before they had a fair chance to learn, while others whose mistakes were just as great were permitted to go on and learn. The point of greatest importance for us to consider is the fact, that ALL had to learn. No man ever jumped into the field of battle, fully armed and equipped, like the dragon's brood in the fable.

Time went on, and at the end of four yours our armies were equal to any that history knows of. In maneuvering and in marching, the leaders and the troops were unsurpassed. In the tables of losses we find a record that will not soon be equaled, if we are to regard the South African and Manchurian campaigns as evidences of the tendencies of modern war. It was an army formed in the school of experience, such as Napoleon found in his hand at the end of the wars of the French Revolution, and with which he was able to fight Europe for twenty years. It was such an army as a Hannibal or an Alexander inherited from his father. Such armies of course are perfect in their way. The process by which they learned may not be improved upon. If war were the common state of mankind, we might continue to rely upon the same school and to believe that no other would suit.

The adoption of a suitable system of peace training did not come quickly. It was years before it was evolved, and it

was the result of many independent lines of thought. Some ideas ran into extremes as in *Kriegsspiel*, for instance. It was long before it was possible to harmonize them all into a consistent system in which each had its place. The term "deductive system" or "applicatory system," best describes the whole. It had its inception in the necessity for supplying troops in time of peace with more of the experience and training which they get in actual war. After learning the theory, it was thought best to apply it to various concrete cases, which were made as practical and real as possible. Tactical schemes were worked out, based on probable and real military situations. The principle and the application were given at the same time, and thus both were firmly fixed in the mind.

In working out this idea it soon became apparent that the new system possessed some decided advantages, which might even be claimed as affording better instruction than the old school of experience in actual war. In peace we can learn one element of one problem at a time, turning from one to the other in order. In war the ground, the troops, your own decisions, the orders of your superiors, the killed, the wounded, are crowded upon you at once with a thousand variations. It is like taking the university course without having studied the primer. The greatest difficulty in peace training is in the length of time it takes to acquire knowledge in this way. The variety of situations is so infinite that no ordinary school course could do more than indicate the general object and character of this kind of study. We may only begin by producing a small variety of situations, presented and applied in such a way as to make the lesson like real experience. To form the "military eye," as it were, to develop a proper habit of thought and action, and to render decisions quickly and accurately, we must rely on practice and intelligence before the highest result will be reached. In the same way that the habit of the drill ground is carried into battle by well disciplined troops, we hope to see the maneuvering habit burned into the soul of every man who is called to command.

The applicatory system has its value for troops, but its

value for those who exercise the higher duties of command is greater. Here it is possible to reproduce in the section room almost exactly the conditions of a real campaign. In fact, we can take an example from history and work it out from our own point of view, aided by the light of experience and criticism. We shall lack the sense of responsibility, the excitement and the physical strain. We gain by being able to submit our decisions to the test of criticism and study. In the real campaign we have not the time to digest our experience. In the imaginary campaign we exclude every matter that would tend to divert the untrained mind from the particular subject in hand.

The results of the new methods are startling indeed. We might expect nothing but success from a nation which for centuries had bound her best and brightest men to the trade of war. But when the Chilians, the Turks and the Japanese, adopting these ideas under good instructors, astonish us by their military proficiency, obtained in a marvelously short period of time, we must seek for the cause in the correctness of their system of training. We must realize that wars are to be conducted by peace-trained soldiers, led by peace-trained generals, who are assisted by a peace-trained staff. Under this careful system we must learn how to develop safe leaders for our troops. Brilliancy of the old kind has little of its old chance in these days of intrenchments and long-range artillery. Promotion is slow and men do not reach high position in youth, but veterans of forty years of peace service will take the field with all the confidence of men who have fought in a hundred battles. This has been done often within the last forty years. It is the modern development of war. Perhaps under the new tests we may reverse the old maxim, that "In our profession the fittest do not survive."

The field maneuvers represent the supreme effort in time of peace to show an army ready for war. They form the graduating thesis of the applicatory system of instruction. In them the troops as well as the leaders show all they know about their profession. But as field maneuvers are merely a necessary preliminary to real war, so must they also be pre-

ceded by a careful course of elementary training. Without it the maneuvers would be as unsatisfactory as war itself without preparation. The leaders would show vacillation and indecision in every form. The troops would be placed in false and unreal positions, which they would be quick to discover but unable to remedy for themselves. The whole would lose the character of a military exercise and degenerate into an old time "sham fight" or "militia muster." To teach a man to swim let us not throw him into deep water before he can paddle a bit in the shallows.

Taking account only of the duties of officers, we may divide them into two classes—those conducted indoors and those conducted in the open. In the first class are map problems and map maneuvers; in the second class are staff rides or terrain exercises and maneuvers. I will discuss them in the order named.

Officers joining with nearly four years of service may of course be presumed to be familiar with the drill book, the regulations, and the ordinary field service of troops.

Starting out on the broad principle that education consists in thoroughly learning one thing at a time, we place map problems at the head of the practical course. The map problem is simply a problem, admitting of a written answer, solved by the aid of a map. The questions are such as require a study of the map, and, under the usual conditions of service, would be solved by the commanding officer and his staff. It is natural that the map should call for our first attention because we ordinarily see it before we have a chance to examine the ground which it represents. An early experience is thus obtained of the difficulties which are encountered at the beginning of every military operation. It is better than the corresponding experience in active service, because you have nothing to divert you, plenty of time to make up your mind, and full opportunity to discuss and criticise. It is supposed that training of this kind develops the judgment in such a way as to lead to prompt and rapid decisions. The mind is led into the same channels it would follow in active service; you study long over some order that would perhaps be given verbally and

without preparation, and when the day of action comes, men will say that you are filled with quick and happy inspirations in the field. A great soldier has left on record the statement, that it was not genius that revealed to him the sudden and unerring solutions of military problems that often astonished the world—it was long study. "I brood upon the map," he said. The study of the map, then, helps us to give the proper direction of events, and to formulate definite plans of action. In other words, it is a study of orders.

We will have a large number of map problems with solved solutions; after that there will be problems for original discussion and solution. At the completion of this you will be able to solve most of the ordinary situations and issue proper orders to meet them.

One step further than the map problem is the map maneuver, or the *Kriegsspiel* of the Germans. It is simply an exercise where we show the operations of war by the movement of small blocks, representing troops, over the surface of a map. It supplies an idea of the moving incidents of the campaign and those matters which depend upon the factors of time and space, and the various relations between the troops and the ground, such as the ployment and deployment of lines and columns, rates of march, the capacities of defensive and offensive positions to commands of a certain size. Having, therefore, filled the mind with some military situation; having formed your plan and issued your orders, and made your dispositions, the whole may be tested by map maneuvers.

The original idea of the *Kriegsspiel* and, in fact, the leading idea of every practice of this kind, up to a recent date, was to make it a "battle exercise," in which decisions were given as to the actual loss in killed and wounded, the effect of fatigue and demoralization, and the influence of chance on the final result; in fact, all modifying factors that could be thought of were duly considered. It made an exceedingly complicated system, requiring much study and practice. Its many difficulties limited its use to a few localities where there were exceptional advantages in its favor. Recent improvements in weapons of war and important

changes in methods of attack and defense have caused doubt to be felt as to the accuracy of former rules under the latest conditions, and gradually the battle idea has become eliminated from the exercise. This simplifies it greatly and leads to its logical use as an aid to instruction. We will use it as an exercise simply in maneuvering troops up to the moment of actual contact. Prior to this the small combats of minor importance are settled in a general way by the decision of the umpire. As soon as the plans of both sides are developed and there only remains the final test of battle to decide the result, the screen is removed and the umpire discusses the final situation.

A full discussion of the so-called war-game had better be reserved for another occasion. At present it is sufficient to say that this kind of instruction is officially recognized in most military countries. In many of them it is an obligatory part of the military education of officers, and in its simpler forms it is used for the indoor instruction of non-commissioned officers and men. These things therefore are claimed for the maneuver on the map :

1. It supplements previous exercises by practice in map reading.
2. It has the advantage of presenting the whole situation and not a limited portion of it to the view.
3. It gives practice in issuing, interpreting and executing orders.
4. It gives practice in showing the principles and application of strategy and tactics. In the same way it is a useful adjunct to the study of military history.
5. It gives practice in making quick and accurate decisions. In the application of principles it shows in a few hours operations that would ordinarily consume many days.

The next form of exercise has been called war ride, staff ride, terrain exercise, and so on. The troops are still imaginary, but the map is replaced by the real ground. The officers work out their problems in the open. In this way they come to understand the relations between the ground and the map, they see the limitations that exist in the picture of ground given by the very best map, and they verify

the principle, that while general directions are given from the map, the details must be left to the commander on the ground. The troops remain imaginary, because the idea is still to develop and persistently to cultivate a perception of the capabilities of the ground itself, a quality which is all important and exceedingly rare. It means an ability to grasp the military features of a landscape, just by looking at it, to conceal your own designs and to discover those of the enemy from slight indications, to make proper dispositions for every emergency, to select an objective and not to lose it. It is evident that the presence of the troops would tend to divert the attention, and that the tendency would be to devote one's self to the personal direction of the troops. There are good reasons why troops need not be present in preliminary exercises of this kind.

The exercise may be conducted under a dozen or more forms. In all of them the object is to visit some piece of country where the various conditions of military study are imagined just as if the landscape were full of troops. For instance a detail of officers could ride out and select ground for future battles in the neighborhood, just as German staff officers are said to have done in France before the War of 1870, and just as we know that the Confederate General Johnston did before he retreated on Atlanta in 1864. On a smaller scale we might indicate how we would defend a village, attack a wood, cross a river, ascend a height, or search a country for another force.

Next come maneuvers, in which the officers assume command of troops in the open. Here again we proceed ordinarily through several stages of instruction and practice. At first the enemy need not be indicated, or he may only be outlined by flags and a few men representing larger bodies of troops. Now for the first time you have to consider the powers of the troops to undergo exertion. The practical application of this is that the energy of troops can be reduced more by fatigue than by the fire of the enemy. Where we lose one man by a bullet, we shall lose three or four from fatigue or other disorganizing causes.

Finally opposing forces are introduced, the fire is represented by blank cartridges, and we endeavor to represent the conditions of hostile contact. The guiding principle for officers will be that tactical skill in officers of low rank will be necessary to success. By tactical skill is meant the ability to judge correctly and to maneuver properly over varied ground. An easy self-confidence and a readier assumption of the leadership of men in trying situations will replace the hesitation, contradictory orders and delays of the man who has never tried his powers before.

So far we have considered only the value of experience gathered by each man for himself and by himself. There is still another kind of experience which we should learn to use, and that is the experience of others. The causes of the triumphs and disasters of the past form a class of study which will best lead us to an appreciation of the meaning of strategy. In former times these subjects were made the bases of elaborate treatises, logically arranged, with principles boldly stated and examples cited to fit each case. The fault of such a system is in the fact, that this strategy is often an afterthought of the ingenious commentator who quotes the case, and that historical incidents can generally be found to illustrate almost any kind of a principle. The old idea of teaching the art of war as a doctrine is now changed. The higher theory as taught by the books is put aside, and we study the campaigns first and pick out the strategy afterwards, thus reversing the former method. Here, then, we have another brilliant example of the study of principles by their application. "Study attentively," says Napoleon, "the campaigns of the great masters." That wise advice was not understood for a long time. It was his own practice, as we now know, but the added importance of the study of military history in the curriculum of the war college is a recent idea.

Here, then, are the general principles upon which we expect to lead to an appreciation and knowledge of the higher duties of commanding men, a knowledge which at the least will fit you to act as staff officers and to aid in carrying out the will of a commanding general. Lack of time will prevent the full development of the course for both classes,* as

this school has not yet reached the point where all preliminary study has been had in the garrison school; but this plan will be consistently followed as far as possible.

It would be easy to adopt a course of study, filled with the military pedantry of our own and other ages, and this is a common error with those who attempt military study. Likewise, as all arts and sciences are brought to assist in modern warfare, we might supplement our previous studies by technical work, which would undoubtedly be of use. But none of this would fill the greatest void in our education, and practice us in the hardest duties of our office, or prepare us for the exercise of our wisest and soundest judgment. Military study must include not only the direction of troops as fighting bodies, but all the arrangements concerning their marching, rest and safety, their organization, equipment and supply. It involves the translation of these ideas into proper orders, it covers the collection and record of all operations. Not the least of its objects is the preparation of problems, the conduct of field maneuvers, and the duties of umpires. Our goal is the leading of troops; our ambition is to learn the art of commanding men.

The wars of our day have changed in character. No longer waged in the name of religion or to satisfy the jealousies of reigning houses, they now result from great national movements, aims and ambitions. The consolidation of nations on racial lines makes greater the national interests involved, and probably adds to the bitterness of war. The advance of civilization may not be an unmixed blessing to humanity. It makes new conditions necessary to national existence. Such are a market for surplus products, work for all workers, room for the overflow of population. In meeting these conditions, diverse interests will clash and war will result, with ever increasing skill and ever growing armies and navies. Whether the wars for the rights of colonization and trade will reach us in our day, is hard to say. We may be sure, however, that greater efforts than ever before will be made to attain the ends of war, and that the problems of military men will be correspondingly great.

*The Staff Class and the Class of the Infantry and Cavalry School.

SHALL SUBORDINATE OFFICERS LEARN THE BUSINESS OF GENERALS?

To the Editor of the Cavalry Journal:

IN the *Army and Navy Journal* of February the 20th appeared an article by Major Bingham of the Corps of Engineers, criticising the tendency in our service to teach a general's business to officers of subordinate rank. Among some old papers pertaining to the Lyceum conducted at this post in the winter of 1897-98, have been found the following documents, which are self explanatory and so peculiarly applicable to the discussion inaugurated by General Bingham that I send you a copy for publication in the JOURNAL:

“POST LYCEUM,
“FORT APACHE, ARIZONA, Jan. 3, 1898.

“MEMORANDUM:

“At the meeting of the Lyceum last week I submitted for discussion at this session a proposition to adopt certain problems for solution as a part of the Lyceum course. Two of these were on Indian and four on civilized warfare.

“During the past week the proposed problems on civilized warfare have been criticised upon the ground that they deal with subjects with which persons of our rank are little concerned. That ancient and respectable (?) dictum, that we should content ourselves with studying our own duties (presumably on the parade ground) and not aspire to a knowledge of the business of a general officer, has been cited as a squelcher to this proposition. It is a pity that in this day of reviving interest and enthusiasm in acquiring a practical knowledge of a soldier's actual every-day duty in time of war, this illogical bugaboo and stumbling-block to progress cannot receive a decent burial. It has long been a corpse, after a harmful and unjustifiable existence.

“I presume it will not here be thought impertinent seriously to consider whether the study of strategy is not studying a general's business; and whether a general should wait

until he becomes a general before undertaking to learn his business. History is crowded with instances where, upon the outbreak of hostilities (and war generally arises unexpectedly), the mantle of general officers has immediately fallen on colonels and lieutenant-colonels. The history of our Civil War furnishes instances where this mantle fell upon many officers who were captains, several who were lieutenants (but lately cadets), and at least two who were doctors when the war began. Such responsibilities, devolving upon them in a totally unforeseen manner, found them none too familiar with the nature of their obligations.

“But, ignoring entirely the exceedingly remote possibility that any of us will ever be struck by such lightning, let us assume (what is not true) that it is a general’s business alone which these problems are calculated to teach. Then let us address our discussion to the more practical question, how we are to fit ourselves to render, in time of war, creditable service as staff-officers to our generals.

“Does a general do all of his own work, or most of it through his staff officers? Who works out the innumerable practical details of tactics and logistics upon which his orders are based? Who draws up the drafts of the orders themselves, and sees that all the details covered thereby are carefully explained to subordinate commanders? The general commanding a large force cannot be everywhere at once to give information and correct mistakes. Upon whom does he rely to do this? There are few military geniuses, like Napoleon and Von Moltke, who never need assistance or advice. With whom does the average general most frequently counsel, even concerning his strategical purposes? Can a general expect valuable service or sound judgment from a staff-officer who knows nothing about a “general’s business?” Wherever in war the government needs one general, there it also needs from ten to twenty well trained staff-officers.

“I will acknowledge that during my service of twenty years I have several times encountered in service periodicals articles voicing criticism similar to that I am now replying to. It has seemed to me that such critics have always ignored the considerations I have just mentioned, but this was natural, as those who have presumed to publish criticisms have generally been among the class who have the least knowledge of the instruction really most needed by army officers. Possessing generally no practical experience with the army, they are *practically* ignorant of the state of instruction in the army at large.

“The field exercises we have been having for a number of weeks are the solution of simple military problems, involving the duties and responsibilities of majors, captains and lieutenants. The entire available command participated in them, they covered all the terrain immediately surrounding the post, and each has been assigned to a designated officer for discussion before the Lyceum. This discussion will cover so well the ground of simple problems, with our command, on the terrain covered by our Lyceum map, that additional elementary problems limited to the same command and terrain could not be more than an approximate duplication of those already assigned for consideration.

“To maintain interest, it is highly desirable to have something different, and I know of no more important subject pertaining to actual war, as well as to field exercises, than the proper preparation and form of field orders. I think I am well within the limits of conservative judgment, when I announce a conviction that the very great majority of our officers are deficient in knowledge of this important subject. As the problems here proposed in civilized warfare deal very largely with the preparation of field orders in proper form, I think they are pertinent and appropriate.

“Though the assumed force seems disproportionately large when compared with our present personal probabilities in the way of command and responsibility, the orders required for the operations of such a force will contain only such provisions as are equally required in orders regulating the operations of smaller commands.

“Another reason for assuming a force of considerable size, may be found in the impossibility of establishing a proper tactical system of outposts, with a force the strength of ours, for a post situated as is Fort Apache.

“An accurate knowledge of the proper form and contents of a field order is necessary to all officers, regardless of their rank, for though it be possible an officer may never be called upon to issue an order, all must necessarily have to receive and interpret them. Now the method pursued in teaching the art of reading maps is to teach the art of making them, and I believe there is no better way of creating capacity for properly interpreting orders than teaching how to make them.

“Few have either the time or inclination to complete a thorough study of such a tedious subject voluntarily. They must be driven to it by an exacting responsibility or special assignment. Interest must be aroused, or the necessity must

be great, before the subject can be pursued with that degree of zeal and enthusiasm which produces successful results. I know of no better place to make a beginning than in the Lyceum. The scope of Lyceums must necessarily widen as time passes, and I see no good reason why our Lyceum should be limited to following in the wake rather than proceeding with the van of progress.

"There can be no possible doubt that a knowledge of this subject should be acquired prior to the commencement of war. In support of the assertions and sentiments set forth in these remarks, I desire to read you a few extracts from a lecture on this subject delivered by Captain Eben Swift, Fifth Cavalry, when he was an instructor in the art of war at the Infantry and Cavalry School, in 1895."

The above memorandum was signed "J. F. Bell, Lieutenant, Seventh Cavalry." Though still a lieutenant when the war with Spain broke out only *three months later*, this officer was a brigadier-general of volunteers in less than two years after his Lyceum argument.

The problems were adopted and solved by the Lyceum. Copies of them are enclosed herewith, together with a copy of Lieutenant Bell's solution of one of them.

Very respectfully,

GEO. B. RODNEY,

First Lieutenant, Fifth Cavalry.

FORT APACHE, ARIZONA, November 15, 1904.

PROPOSED PROBLEMS

FOR SOLUTION BY LYCEUM AT FORT APACHE, ARIZONA TERRITORY.

INDIAN WARFARE.

General Situation.

It will be assumed that the Chiricahua Cattle Company in bringing in a herd of cattle to this post stops for the night on the south bank of Black River, in the vicinity of a camp of Indians on a hunting expedition from the San Carlos Reservation. On arrival at the post the representative of the

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be great, before the subject can be pursued with that degree of zeal and enthusiasm which produces successful results. I know of no better place to make a beginning than in the Lyceum. The scope of Lyceums must necessarily widen as time passes, and I see no good reason why our Lyceum should be limited to following in the wake rather than proceeding with the van of progress.

"There can be no possible doubt that a knowledge of this subject should be acquired prior to the commencement of war. In support of the assertions and sentiments set forth in these remarks, I desire to read you a few extracts from a lecture on this subject delivered by Captain Eben Swift, Fifth Cavalry, when he was an instructor in the art of war at the Infantry and Cavalry School, in 1895."

The above memorandum was signed "J. F. Bell, Lieutenant, Seventh Cavalry." Though still a lieutenant when the war with Spain broke out only *three months later*, this officer was a brigadier-general of volunteers in less than two years after his Lyceum argument.

The problems were adopted and solved by the Lyceum. Copies of them are enclosed herewith, together with a copy of Lieutenant Bell's solution of one of them.

Very respectfully,

GEO. B. RODNEY,

First Lieutenant, Fifth Cavalry.

FORT APACHE, ARIZONA, November 15, 1904.

PROPOSED PROBLEMS

FOR SOLUTION BY LYCEUM AT FORT APACHE, ARIZONA TERRITORY.

INDIAN WARFARE.

General Situation.

It will be assumed that the Chiricahua Cattle Company in bringing in a herd of cattle to this post stops for the night on the south bank of Black River, in the vicinity of a camp of Indians on a hunting expedition from the San Carlos Reservation. On arrival at the post the representative of the

“The field exercises we have been having for a number of weeks are the solution of simple military problems, involving the duties and responsibilities of majors, captains and lieutenants. The entire available command participated in them, they covered all the terrain immediately surrounding the post, and each has been assigned to a designated officer for discussion before the Lyceum. This discussion will cover so well the ground of simple problems, with our command, on the terrain covered by our Lyceum map, that additional elementary problems limited to the same command and terrain could not be more than an approximate duplication of those already assigned for consideration.

“To maintain interest, it is highly desirable to have something different, and I know of no more important subject pertaining to actual war, as well as to field exercises, than the proper preparation and form of field orders. I think I am well within the limits of conservative judgment, when I announce a conviction that the very great majority of our officers are deficient in knowledge of this important subject. As the problems here proposed in civilized warfare deal very largely with the preparation of field orders in proper form, I think they are pertinent and appropriate.

“Though the assumed force seems disproportionately large when compared with our present personal probabilities in the way of command and responsibility, the orders required for the operations of such a force will contain only such provisions as are equally required in orders regulating the operations of smaller commands.

“Another reason for assuming a force of considerable size, may be found in the impossibility of establishing a proper tactical system of outposts, with a force the strength of ours, for a post situated as is Fort Apache.

“An accurate knowledge of the proper form and contents of a field order is necessary to all officers, regardless of their rank, for though it be possible an officer may never be called upon to issue an order, all must necessarily have to receive and interpret them. Now the method pursued in teaching the art of reading maps is to teach the art of making them, and I believe there is no better way of creating capacity for properly interpreting orders than teaching how to make them.

“Few have either the time or inclination to complete a thorough study of such a tedious subject voluntarily. They must be driven to it by an exacting responsibility or special assignment. Interest must be aroused, or the necessity must

be great, before the subject can be pursued with that degree of zeal and enthusiasm which produces successful results. I know of no better place to make a beginning than in the Lyceum. The scope of Lyceums must necessarily widen as time passes, and I see no good reason why our Lyceum should be limited to following in the wake rather than proceeding with the van of progress.

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FORT APACHE, ARIZONA, November 15, 1904.

PROPOSED PROBLEMS

FOR SOLUTION BY LYCEUM AT FORT APACHE, ARIZONA TERRITORY.

INDIAN WARFARE.

General Situation.

It will be assumed that the Chiricahua Cattle Company in bringing in a herd of cattle to this post stops for the night on the south bank of Black River, in the vicinity of a camp of Indians on a hunting expedition from the San Carlos Reservation. On arrival at the post the representative of the

company reports to the commanding officer that during the night some of his cattle disappeared and that after a careful search their trail was found and followed into the rancheria of two Indian families, where a part of the meat was found. There were about seventy-five Indians in the entire band, twenty-five of whom were well armed, able-bodied bucks, the rest being old men, women and children. Two of the young men acknowledge taking the cattle, but refuse to make reparation, claiming the cattle by way of remuneration for the privilege of passing through their land. The other members of the band support them and refuse to allow their arrest by the cattle men.

Problem No. 1. Special Situation.

These facts are reported to the Agent at San Carlos, who requests the commanding officer at Fort Apache to send out and arrest those two Indians and confine them in the guard-house at Apache until he can send after them and investigate the case. It is known that they are in an ugly mood, and will not permit arrest in the usual way by a few men or by Indian scouts. The commanding officer concludes to send a military command.

Required :

1st. An order prepared in due form, directing the duty, showing the constitution of the command deemed proper to send, and covering all other details necessary and proper to be covered in such a case.

2d. A written memorandum, setting forth in detail the methods to be followed in conducting negotiations with the Indians and in making the arrest, showing clearly such precautions as should be taken to provide for a contingency of treachery or resistance.

Problem No. 2. Special Situation.

The occurrences described in Problem No. 1, and other troubles with cattlemen, result in hostilities, and the Indians of both the San Carlos and White Mountain reservations conclude to go to war. As a preliminary, however, it is agreed to make a secret preconcerted attack upon Fort Apache for

the purpose of plunder and of releasing the two imprisoned Indians. The telegraph lines between Carlos and Holbrook are cut and the Indian concentration takes place at night, unknown to the military authorities. A friendly Indian arrives at the post, reports the state of affairs to the commanding officer, and informs him that the post will be attacked within an hour on all sides at once.

Required: Written reports setting forth:

1st. Best dispositions of the available force of the post to resist such an attack.

2d. What should be done to give the alarm to the surrounding community, and how this can best be accomplished.

3d. Assuming that sufficient time has been had to prepare for such an attack, what should be done in anticipation of a siege by an overwhelming number of Indians, in the way of necessary precautions and preparation of the available force, construction of trenches, barricades, etc., with facilities and material available; their location, material of which constructed, etc.

CIVILIZED WARFARE.

General Situation.

An army of the South (Blue) with a base on the Southern Pacific is operating against an army of the North (Brown) whose base is on the Santa Fé. An advanced brigade of Blues, consisting of the First, Second and Third Regiments of Infantry, headquarters and two squadrons Fourth Regiment of Cavalry, Light Battery "A" Fourth Artillery, Company A, Corps of Engineers and Company B, Hospital Corps, has advanced to Fort Apache and there established a sub-base, or *dépôt* of supplies.

Problem No. 3. Special Situation.

The Browns begin to advance southward in two columns. One starts at Winslow, probably intending to proceed via Heber and Pinedale to a junction with the other, which proceeds southward on the Holbrook Road. The Blue brigade commander receives orders from his division commander, who is advancing from the south, to leave a small guard for

SHALL SUBORDINATE OFFICERS LEARN THE BUSINESS OF GENERALS?

To the Editor of the Cavalry Journal:

I N the *Army and Navy Journal* of February the 20th appeared an article by Major Bingham of the Corps of Engineers, criticising the tendency in our service to teach a general's business to officers of subordinate rank. Among some old papers pertaining to the Lyceum conducted at this post in the winter of 1897-98, have been found the following documents, which are self explanatory and so peculiarly applicable to the discussion inaugurated by General Bingham that I send you a copy for publication in the JOURNAL:

“POST LYCEUM,
“FORT APACHE, ARIZONA, Jan. 3, 1898.

“MEMORANDUM:

“At the meeting of the Lyceum last week I submitted for discussion at this session a proposition to adopt certain problems for solution as a part of the Lyceum course. Two of these were on Indian and four on civilized warfare.

“During the past week the proposed problems on civilized warfare have been criticised upon the ground that they deal with subjects with which persons of our rank are little concerned. That ancient and respectable (?) dictum, that we should content ourselves with studying our own duties (presumably on the parade ground) and not aspire to a knowledge of the business of a general officer, has been cited as a squelcher to this proposition. It is a pity that in this day of reviving interest and enthusiasm in acquiring a practical knowledge of a soldier's actual every-day duty in time of war, this illogical bugaboo and stumbling-block to progress cannot receive a decent burial. It has long been a corpse, after a harmful and unjustifiable existence.

“I presume it will not here be thought impertinent seriously to consider whether the study of strategy is not studying a general's business; and whether a general should wait

until he becomes a general before undertaking to learn his business. History is crowded with instances where, upon the outbreak of hostilities (and war generally arises unexpectedly), the mantle of general officers has immediately fallen on colonels and lieutenant-colonels. The history of our Civil War furnishes instances where this mantle fell upon many officers who were captains, several who were lieutenants (but lately cadets), and at least two who were doctors when the war began. Such responsibilities, devolving upon them in a totally unforeseen manner, found them none too familiar with the nature of their obligations.

“But, ignoring entirely the exceedingly remote possibility that any of us will ever be struck by such lightning, let us assume (what is not true) that it is a general’s business alone which these problems are calculated to teach. Then let us address our discussion to the more practical question, how we are to fit ourselves to render, in time of war, creditable service as staff-officers to our generals.

“Does a general do all of his own work, or most of it through his staff officers? Who works out the innumerable practical details of tactics and logistics upon which his orders are based? Who draws up the drafts of the orders themselves, and sees that all the details covered thereby are carefully explained to subordinate commanders? The general commanding a large force cannot be everywhere at once to give information and correct mistakes. Upon whom does he rely to do this? There are few military geniuses, like Napoleon and Von Moltke, who never need assistance or advice. With whom does the average general most frequently counsel, even concerning his strategical purposes? Can a general expect valuable service or sound judgment from a staff-officer who knows nothing about a “general’s business?” Wherever in war the government needs one general, there it also needs from ten to twenty well trained staff-officers.

“I will acknowledge that during my service of twenty years I have several times encountered in service periodicals articles voicing criticism similar to that I am now replying to. It has seemed to me that such critics have always ignored the considerations I have just mentioned, but this was natural, as those who have presumed to publish criticisms have generally been among the class who have the least knowledge of the instruction really most needed by army officers. Possessing generally no practical experience with the army, they are *practically* ignorant of the state of instruction in the army at large.

his post and dépôt of supplies and proceed with the rest of his brigade on an armed reconnaissance of the enemy. He decides to advance in two columns also, one on the Holbrook Road, via Cooley's Ranch, the other via Forestdale and Pine-dale to a junction, if desirable or necessary, with the first-mentioned, on the Holbrook Road. Columns of enemy thought to be about equal in strength.

Required :

- 1st. Division and distribution of troops.
- 2d. Models of orders to be issued by the brigade commander.
- 3d. Models of orders to be issued by the commander of each column, showing order of march, composition of each portion of the column, advance-guard, main body, etc.
- 4th. Models of orders issued by commanders of the two advance-guards, indicating order of march, duty expected, and such other things as are necessary and proper.

Problem No. 4. Special Situation.

The Blue brigade develops and reports upon the enemy, unites at Fool Hollow, and falls back to Cooley's Ranch, closely followed by the eastern column of Browns.

Required: Written reports embodying:

- 1st. Model of order to be issued by the brigade commander (Blue) for the movement, showing division and distribution of troops, rear-guard, main body, etc.
- 2d. Model of order issued by commander of rear-guard, specifying duty expected, order of march, etc.

Problem No. 5. Special Situation.

At Cooley's Ranch the brigade commander ascertains that the western column of Browns is proceeding via Forestdale and Cedar Creek toward Fort Apache, and receives instructions to leave a small containing force at Cooley's with orders to retire slowly, delaying the enemy as much as possible, and with the rest of his command to hurry back and establish outposts for the protection of the post, dépôt of supplies and the Agency Ford, which he is cautioned to pre-

vent being forced or turned, and to hold at all hazards.

Required :

1st. Written reports showing division and distribution of entire force, strengths of different portions of outposts, etc.

2d. Showing location of reserves, supports, pickets, or cossack posts, etc., and of lines of observation and resistance, including such modifications as may be necessary by night.

3d. Such special provisions as are necessary for the regulation of practical details pertaining to division of time, rotation of duties, relief of different components of outposts, etc.

4th. Such minor field engineering operations as might be necessary accessories to the plan of outposts adopted, *i. e.*, location of temporary roads to facilitate passage of troops to and from lines of observation and resistance, and from one portion to another, location and character of field fortifications and line of trenches, and location and character of means of rapid communication, *i. e.*, field telegraph or telephone lines.

5th. Handling of the force appropriate to attacks from the direction of Cedar Creek and Cooley's and from both directions at once.

Problem No. 6.

Models of orders covering the operations and subjects discussed in Problem No. 5.

SOLUTION OF PROBLEM NO. 3,

1st. *Division and Distribution of Troops.*

Assuming that the infantry regiments are organized in three battalions of four companies each ; that Colonel A commands the First Infantry ; Colonel B, the Second ; and Colonel C, the Third ; the brigade commander would assign one battalion of infantry to the duty of guarding the wagon train, *dépôt* of supplies and post, and distribute the rest of his command as follows : A regiment and one battalion of infantry, a squadron of cavalry, a platoon of artillery, half of a company of engineers, and half of a company of the

hospital corps to each of two columns, one to advance via Holbrook Road, the other via Cedar Creek, Forestdale and Pinedale.

Wagon trains would remain at Apache, and pack trains accompany commands to which assigned.

2d. *Orders to be Issued by the Brigade Commander.*

FIRST BRIGADE, FIRST DIVISION, FIRST (BLUE) ARMY CORPS.

FORT APACHE, ARIZONA TER., 1-27-'98, 7:00 P. M.

Commanding Officer, First Infantry:

SIR:

I. The enemy is advancing southward in two columns. One (the western) started at — (hour) on — (date) from Winslow in the direction of Heber. It may approach this post from a northwesterly direction or proceed via Pinedale to a junction with the other (the eastern) column, which left Holbrook at — (hour) on — (date) and is following the Holbrook-Apache Road.

II. The brigade will start to-morrow on an armed reconnaissance of the enemy.

III. (a) It will proceed in two columns. The eastern column will proceed via the Apache-Holbrook Road, and reconnoiter the eastern column of the enemy. The western column will proceed via Cedar Creek, Forestdale and Pinedale and reconnoiter the western column of the enemy.

(b) You are assigned command of the western column, which will consist of your regiment and the following detachments, which have been directed to report to you, viz.: one battalion of infantry, one squadron of cavalry, one platoon of artillery, a half company of engineers, and a half company of the hospital corps.

(c) You will start to-morrow at 8 o'clock A. M. and establish and maintain connection during the movement with our eastern column.

If the western column of the enemy continues a direct advance upon this post, retire in its front and delay its progress. If it turns eastward, retire in that direction, observing the enemy, and report with your command to me.

(d) It is important that you keep me continually informed of the position and movements of yourself and the enemy.

IV. Wagon trains and heavy baggage will be left at this post. Pack trains will accompany commands to which assigned.

V. I will accompany the main body of the eastern column.

Very respectfully,

_____,
Brigadier General, etc., Commanding.

Sent by Orderly.

Note:—The order issued to the commanding officer of the Second Infantry, commanding the eastern column, would be very similar to the above, with the exception that the last paragraph of section *c* and section *d* would not be included in his order.

Same date, 5:00 P. M.

Commanding Officer, Third Infantry:

SIR:—The commanding general directs that you detail one battalion of your regiment as a guard for the dépôt of supplies, post and wagon trains, which will be left here until further orders; that you have another battalion report to Colonel A, and that with the remaining one you report for duty to Colonel B.

Very respectfully,

_____,
Assistant Adjutant General.

Commanding Officer, Fourth Cavalry.

SIR:—The commanding general directs that you have one squadron of your regiment report to Colonel B, and that with the remaining one you report for duty to Colonel A.

Very respectfully,

_____,
Assistant Adjutant General.

Commanding Officer, Light Battery A, Fourth Artillery.

SIR:—The commanding general directs that you have one platoon of your battery report to Colonel A, and with the remaining one you report for duty to Colonel B.

Very respectfully, etc.

Note:—Similar letters to the commanding officers of Company A, corps of engineers, and Company B, hospital corps, requiring them to send a half company each to report to Colonel A, and with the remaining half to report for duty to Colonel B.

hospital corps to each of two columns, one to advance via Holbrook Road, the other via Cedar Creek, Forestdale and Pinedale.

Wagon trains would remain at Apache, and pack trains accompany commands to which assigned.

2d. *Orders to be Issued by the Brigade Commander.*

FIRST BRIGADE, FIRST DIVISION, FIRST (BLUE) ARMY CORPS.

FORT APACHE, ARIZONA TER., 1-27-'98, 7:00 P. M.

Commanding Officer, First Infantry:

SIR:

I. The enemy is advancing southward in two columns. One (the western) started at — (hour) on — (date) from Winslow in the direction of Heber. It may approach this post from a northwesterly direction or proceed via Pinedale to a junction with the other (the eastern) column, which left Holbrook at — (hour) on — (date) and is following the Holbrook-Apache Road.

II. The brigade will start to-morrow on an armed reconnaissance of the enemy.

III. (a) It will proceed in two columns. The eastern column will proceed via the Apache-Holbrook Road, and reconnoiter the eastern column of the enemy. The western column will proceed via Cedar Creek, Forestdale and Pinedale and reconnoiter the western column of the enemy.

(b) You are assigned command of the western column, which will consist of your regiment and the following detachments, which have been directed to report to you, viz.: one battalion of infantry, one squadron of cavalry, one platoon of artillery, a half company of engineers, and a half company of the hospital corps.

(c) You will start to-morrow at 8 o'clock A. M. and establish and maintain connection during the movement with our eastern column.

If the western column of the enemy continues a direct advance upon this post, retire in its front and delay its progress. If it turns eastward, retire in that direction, observing the enemy, and report with your command to me.

(d) It is important that you keep me continually informed of the position and movements of yourself and the enemy.

IV. Wagon trains and heavy baggage will be left at this post. Pack trains will accompany commands to which assigned.

V. I will accompany the main body of the eastern column.

Very respectfully,

_____,
Brigadier General, etc., Commanding.

Sent by Orderly.

Note:—The order issued to the commanding officer of the Second Infantry, commanding the eastern column, would be very similar to the above, with the exception that the last paragraph of section *c* and section *d* would not be included in his order.

Same date, 5:00 P. M.

Commanding Officer, Third Infantry:

SIR:—The commanding general directs that you detail one battalion of your regiment as a guard for the dépôt of supplies, post and wagon trains, which will be left here until further orders; that you have another battalion report to Colonel A, and that with the remaining one you report for duty to Colonel B.

Very respectfully,

_____,
Assistant Adjutant General.

Commanding Officer, Fourth Cavalry.

SIR:—The commanding general directs that you have one squadron of your regiment report to Colonel B, and that with the remaining one you report for duty to Colonel A.

Very respectfully,

_____,
Assistant Adjutant General.

Commanding Officer, Light Battery A, Fourth Artillery.

SIR:—The commanding general directs that you have one platoon of your battery report to Colonel A, and with the remaining one you report for duty to Colonel B.

Very respectfully, etc.

Note:—Similar letters to the commanding officers of Company A, corps of engineers, and Company B, hospital corps, requiring them to send a half company each to report to Colonel A, and with the remaining half to report for duty to Colonel B.

The orders contained in the above letters could, with perfect propriety, be given verbally to the persons concerned by the brigade commander, and, in fact, would most frequently be given that way.

SPECIAL ORDERS, }
No. — }

Same date, 5 P. M.

With the exception of that battalion of the Third Infantry which is detailed as a guard for the dépôt of supplies, for the post and wagon trains, this command will at once draw and prepare for transportation by packs, ten days' rations and forage, and two hundred rounds of ammunition per field piece, rifle and carbine, and one hundred rounds per pistol. By command of, etc.

Assistant Adjutant General.

3d. *Models of Orders by Column Commanders.*

WESTERN COLUMN, FIRST BRIGADE, FIRST DIVISION, FIRST
ARMY CORPS.

FORT APACHE, ARIZONA TER., 1-27-98, 8 P. M.

DETACHMENT ORDERS, }
No. I. }

*Distribution of
Troops.*

Advance Cavalry:
(Major X)

1 squadron 4th Cav.,
less 1 troop.

Advance Guard:
(Major Y)

2 ½ platoons of cav-
alry;

1 battalion, Third
Infantry.

½ company of Engi-
neers.

1 detachment Hos-
pital Corps.

I. The enemy is advancing south-ward in two columns. One started at — (hour) on — (date) from Winslow in the direction of Heber. The other column left Holbrook at — (hour) on — (date) and is following the Holbrook-Apache Road.

The brigade divided into two columns, will start to-morrow on an armed reconnoissance of the enemy. The eastern column will proceed via the Apache-Holbrook Road to reconnoiter the eastern column of the enemy.

II. This (western) column will reconnoiter the western column of the enemy.

Main body in order
of march :
Commanding offi-
cer and staff.

$\frac{1}{2}$ platoon of cav-
alry.

1 battalion First In-
fantry.

Platoon of artillery.

2 battalions First In-
fantry, less one
company.

$\frac{1}{2}$ company Hos-
pital Corps, less
one detachment.

Rear Guard: (Cap-
tain Z)

1 platoon of cavalry.

1 company, First In-
fantry.

III. (a) The advance cavalry will move at 7:30 A. M. and, proceeding via Cedar Creek, Forestdale and Pinedale, will find the enemy and screen our march.

(b) The rest of the column will assemble at the bridge over White River, at 8 A. M., and the advance-guard will immediately proceed and follow the advance cavalry. The commander of the advance-guard will detach sufficient cavalry to establish and maintain connection with the eastern column during the movement.

(c) The main body will follow at 1,000 yards.

(d) The rear-guard will accompany the pack trains and follow closely.

IV. Wagon trains and heavy baggage will be left at this post.

V. I will be with the main body.

A,

Colonel First Infantry, Commanding.

Copy by orderly to regimental,
battalion, squadron, battery, ad-
vance and rear guard commanders.

4th. *Models of Advance-Guard Orders.*

FORT APACHE, ARIZONA TER., 1-27-98, 9 P. M.

ADVANCE GUARD ORDERS }
NO. I. }

*Distribution of
Troops and Order
of March:*

I. Van Guard:
 $\frac{1}{2}$ platoon Fourth
Cavalry.

2 companies Third
Infantry.

$\frac{1}{2}$ company Engi-
neer Corps.

I. Same as I of preceding order, and add: Our column will reconnoiter the western column of the enemy.

II. The advance-guard will proceed on this duty to-morrow.

III. (a) The vanguard will leave at 8 A. M. and follow the trail of the advance cavalry.

- II. Reserves: (b) The reserve will follow at a distance of 1,000 yards.
- 2 companies, Third Infantry.
- 1 detachment Hospital Corps. (c) The ranking officer of cavalry, with two platoons, performing the duties of connecting patrols, will establish and maintain connection with the eastern column during the movement.
- III. Connecting Patrols on Right Flank:
- 2 platoons, Fourth Cavalry. IV. The commanding officer will be with the vanguard.

Y,

Major Third Infantry, Commanding.

Communicated verbally to commanding officers of all subdivisions and to all cavalry officers.

Note.—Similar orders would be issued in the eastern column.

FIVE YEARS A DRAGOON ('49 TO '54) AND OTHER ADVENTURES ON THE GREAT PLAINS.

PART V.

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AND now the Kansas War was on. I was acting post wagonmaster at Fort Leavenworth, when one night in May, about 10 o'clock, Lieutenant J. E. B. Stuart, regimental quartermaster, First Cavalry, rode in with a requisition for forage and rations for Colonel Sumner's command, camped southwest of Westport, Missouri. He had ridden from there, thirty-four miles, since noon. The command would be out of forage and provisions the next day, and the order was to have the supplies there in time for issue the day after. I was instructed to have teams in from the nearest train, camped nine miles south, as early as possible. I sent word to the watchman at the stable to bring my horse and wake me at 2 o'clock, which he did.

At 3:30 in the morning I was in nine-mile camp, breakfasted and started back at 4:30 and before 7 we were loading at the forage yard and commissary. At 9 o'clock the train started down the road. We arrived at nine-mile camp, fed and watered the mules, and lunched, and at 1:30 were on the road again. I did not expect to go any further, but Stuart came along just then and said the quartermaster had left it with him, and he wanted me to stay with him all the way through, which I did. The roads were exceedingly bad the last few miles before reaching the ferry, and it was dark when we got the last wagon over the Kaw. The way to Colonel Sumner's camp was over a crooked road little traveled, much of the way through timber and mud holes, with no bridges over creeks and deep gullies. Fortu-

nately, the moon gave a dim light. Several wagons were upset, several trees had to be cut down where the road was too narrow and crooked, and in many places limbs must be cut to give room for wagons to pass. In short, at 1 A. M.,



GENERAL J. E. B. STUART.*

after the most incessant toil, we camped near Colonel Sumner's command. I rode with Stuart to headquarters, where he reported his arrival with train and supplies. He loaned me a pair of blankets, and we both lay down in his tent for a nap. I was nearly worn out. Stuart had been a quiet witness of a very hard struggle, and but for his piloting we should not have gotten there that night, for he was the only one of the party who had been over the road.

At sunrise I started for my camp about two miles out and overtook Lieutenant Ransom, late General Ransom of the Confederate Army, and said "Good morning," calling his name. He looked at me very sharply and returned my greeting pleasantly enough, but I thought coolly, as we were on the best

*James E. B. Stuart was born in Virginia and graduated from the Military Academy at West Point in 1854. He was then promoted brevet second lieutenant of United States Mounted Riflemen and reported to his regiment in Texas. In March 1855 he was promoted second lieutenant of the First United States Cavalry (now the Fourth), and served as quartermaster of that regiment from July 1855 until May 1857. He became first lieutenant of the First Cavalry in December 1855, and captain in April 1861.

In May 1861 he resigned and accepted a commission in the Confederate service as lieutenant-colonel of a Virginia regiment. His promotion in the Confederate army was rapid, and he was a lieutenant-general commanding

of terms. I asked where he was going so early, and he said "To Fort Leavenworth." I replied that I was going there too. Just then we crossed a clear stream of water, I dismounted, dropped my horse's rein, and remarked that I would bathe a little and overtake him. He looked askance at me and turned off to ride up to a group of officers' tents on the hill near by. In a clump of willows I took a pretty good bath, wiped myself with a towel that I carried in my holster, combed my hair and whiskers with my fingers, and went on to the group of tents where Ransom had stopped. With him were several officers in front of a tent, seemingly paying considerable attention to me. As I rode up they all laughed heartily. The joke seemed to be on Ransom. He said that he had no idea who I was, but that I was the hardest looking man he ever saw. I was haggard and weary from want of sleep, my hands and face were black with dust and mud, my clothes muddy from head to foot, and my horse and equipment no better. Ransom's description of me was weird indeed, and he declared that he was afraid to ride with me. He had started without arms, and called on Lieutenant Johnson to borrow a pistol. Now that I was cleaned up a little they all knew me. At my camp we got some breakfast and rode to Fort Leavenworth, where we arrived about 2 o'clock. I was as good as new the next day.

Things kept getting worse in Kansas; marching columns and guerrilla bands of both parties (Pro-Slavery and Free State) were moving about all along the border. Outrages were committed by both parties, but the worst feature of the warfare was the raids on homes, ostensibly for political reasons, really very often for robbery and plunder. It

the cavalry of General Lee's army when he received his mortal wound at Yellow Tavern. He died May 12, 1864.

Stuart saw varied and active service during the time that he was a lieutenant in the First United States Cavalry. He was in several expeditions and combats with various Indian tribes, and was severely wounded in a fight with the Cheyennes in 1857. He took an active part in the Kansas disturbances of the fifties, and was in Colonel Albert Sidney Johnston's Utah Expedition in 1858. He was at home on leave of absence in 1859, and accompanied Colonel Robert E. Lee as a volunteer aide-de-camp in the expedition to suppress John Brown's Raid.

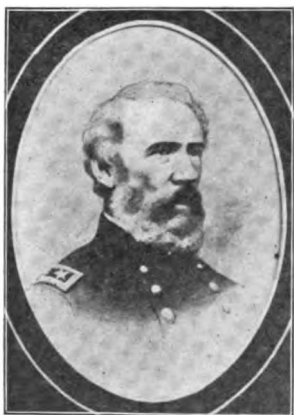
seemed necessary to keep United States troops in camps and on the move as protection to good citizens of both parties and to keep the threatening columns apart. United States troops were stationed near Westport, Franklin, Prairie or Baldwin City, Lecompton, etc. These camps were headquarters from which troops could move quickly when necessary, and must be supplied every ten days with forage and provisions. Something like 100 wagons were required for that purpose, and I was detailed by the quartermaster, Major Sibley, to look after them. Most of the supplies went by Lawrence, crossing the ferry there, when the wagons for Franklin were sent off under an assistant wagonmaster, those for Baldwin City under another, and those for Lecompton, the largest command, under another, etc.

After crossing at Lawrence I generally went on to Lecompton, ten miles, and after finishing there, rode across country to other camps if necessary, returning to Lawrence about the time the wagons from different points reached there, and then to Fort Leavenworth for another ten days' supply. While the teams were not overworked, I was very much so. I never worked so hard and so continuously from May to October as I did this season; five months of exposure and overwork, which would have ruined any man of weak constitution; and it nearly ruined me.

The last trip I started on was with a train of supplies for some troops opposite Topeka. Having delivered them I was to ride across to Lecompton and then to Lawrence. The train under Mr. Beery started early, but I did not get off until afternoon. I was ill enough to be in bed, but said nothing of it. I rode alone, and was so sick that I could scarcely sit my horse, and afraid to dismount lest I could not mount again. In this condition I arrived at a house on Stranger Creek, east of the crossing near Easton. I did not know the people, but dismounted, staggered into the house, and was unconscious. About 8 o'clock the next morning I opened my eyes and recognized the woman standing over me bathing my temples and forehead as the one I had seen when I dismounted. I felt a little light headed, but my

mind was clear. I imagined, however, that I had been there three days, from Tuesday to Friday.

The supplies in the train were for two commands some distance apart, and I had the papers, invoices, number of wagons to go to each place, the contents of each wagon, etc. The wagonmaster knew nothing about the distribution of goods, and, if this was Friday, they were a day behind and there would be confusion. However, I soon learned that my idea of the time I had been there was but a delirium, and this was Wednesday morning. I had been there from 5 o'clock Tuesday to 8 o'clock Wednesday. This good woman had watched over me all night. Mr. and Mrs. Martin Hefferlin were the people, and I might have died but for their kindness. My fever lasted nearly all night, during which I was quite violent, requiring close attention; and now I was nearly helpless, but my mind was clear. I inquired what time the stage for Fort Riley would pass, and Mrs. Hefferlin said in about an hour. I bundled up my



GEN. EDWIN VOSE SUMNER.*

papers and memorandum book, wrote a short explanation and gave it to the stage driver, whom I happened to know, and who promised to give them to the wagonmaster. I found I could not ride, and returned to the fort with Lieutenant Buford (afterwards General Buford) who was en route

*Edwin Vose Sumner was born in Boston in 1797, and educated at Milton Academy. He was appointed second lieutenant of the Second Infantry in March 1819, became first lieutenant in 1823, and was promoted to captain First Dragoons (now First Cavalry) at the organization of that regiment in March 1833. In 1846 he was promoted major Second Dragoons (now Second Cavalry), and in 1848 lieutenant-colonel First Dragoons; and when the First Cavalry (now the Fourth) was created in 1855, he was appointed its colonel. He was appointed brigadier-general in March, 1861, and major-general of volunteers in June of the same year. He died in March, 1863.

General Sumner had his share of wars. He distinguished himself in the Black Hawk War, and took part in numerous expeditions against Indians. He participated in every engagement of General Scott's army in its advance

from Fort Riley in an ambulance. For two weeks I alternately shook with chills and burned with fever, but finally pulled out.

The incidents of this summer's work were numerous, but would be mostly uninteresting now. The history of the Kansas War has been written by many able pens, some truthful and some garbled and exaggerated. My part in it was that of an humble employé of the government. It was not my right or privilege to carry the news from Lawrence, the Free State headquarters to Leavenworth, the Pro-Slavery headquarters, nor vice versa. Of course a great deal came under my observation that might have been useful to either party, but my life was at stake every day if I became a news-bearer in either direction. Both parties contained zealots and enthusiasts who would hesitate at nothing to crown themselves with glory by killing some one on the other side. Most of the men on either side were merely struggling for a principle—whether Kansas should be a free or a slave State—whether they should build homes, as most of them wanted to, in a free or a slave State; and most of both parties were honest, and willing to abide the result of a fair vote; but neither could shake off the element that joined for adventure, for revenge, for robbery, for murder; and that element was a curse to both parties.

I was present at Lecompton when the compromise was effected, and both parties settled down to peace in the fall of 1856. Pro-Slavery and Free State agreed to keep the peace and frown down every disturbing element. Captain Sam Walker was placed in command of a company of Free State men, and Captain John Wallace in command of a com-

from Vera Cruz to the City of Mexico, was wounded while leading a cavalry charge at Cerro Gordo, and for gallantry in holding back 5,000 Mexican lancers at Molino del Rey, was brevetted colonel.

In the Civil War he commanded the First Corps of the Army of the Potomac, and was in about all the battles that army engaged in, till General Hooker was placed in command of it. Thereupon he asked to be relieved and was ordered to command the Department of Missouri, but he died suddenly while on his way to his station.

He was twice wounded in the Seven Days' Battles before Richmond, and received his fourth battle-wound at Antietam.

pany composed of the best element of the Pro-Slavery party—all pledged to act together for the common good and the peace and prosperity of the Territory. Homes became safe, murder and arson were unpopular.

One lovely Sabbath, while encamped near Lecompton, I saw half a dozen houses burning—all belonging to Free State people, who were afraid to remain at home and were at Lawrence. Colonel Cook entrusted to my care a Free State minister who had been captured by the Pro-Slavery party, and whose home was near Leavenworth, and requested me to see that he got home to his family. He was the Rev. J. H. Byrd. I kept him concealed in a wagon, and he got home safely, was in charge of the government farm at Fort Leavenworth during the Civil War, and died on his farm near Lawrence in September, 1897.

On the same trip, while crossing teams at Lawrence, a man of good address and the appearance of a gentleman, asked me if he could ride in one of my wagons to Leavenworth. He was about thirty years old, said he had a family in Ohio, had been looking over the country, and now wanted to go to Leavenworth and take boat for St. Louis and home. I told him he could go with me, and pointed to a wagon in which he might ride. A citizen sentinel pacing up and down the river bank with a Sharp's rifle on his shoulder said, that by General Lane's order no one was allowed to leave Lawrence, hence this man could not go. The officer in charge of the guard was called and the man remonstrated, said he had nothing to do with defending Lawrence from an attack which was expected, that he was a citizen of Ohio and was traveling through Kansas, as any free citizen of the United States had a right to do, and did not want to be drawn into the Kansas War—he would leave the Territory as quickly as he could get a boat at Leavenworth. But the guard said, "No," in a way that aroused the man's anger. Turning to me he said, "I wish I had a good gun or pistol, I believe I would just back on to that boat and see what they would do." I told him to get into the wagon—it would not wait for him—which he did, and the boat was shoved off. The man in charge turned angrily to me and said he would

report this to General Lane. I said: "I do not think you need trouble yourself—General Lane doesn't care anything about me—in fact, he doesn't know me." Some gentleman called to him, they talked a while and I heard no more of it. I fed Mr. Byrd and my new passenger as well as I could from my mess and landed them safely, for which they were very thankful.

The ferry at Lawrence was a flat-boat run by pulleys on a rope stretched across the river and fastened to a tree on either side and propelled by the force of the current. The boat was not large enough to hold a wagon and six mules, so the leaders were detached from the team and led around to a shallow ford higher up stream, where one might cross on horseback or with loose animals, but could not cross wagons. A Frenchman, married to a Delaware woman and living with the Delaware Indians on the north side of the river, built a boat and stretched a rope; and when I came along one day he met me two miles north of the ferry and wanted me to cross some of my wagons on his boat. I galloped on and found that he had made a good road and had a good boat that would carry a wagon and six-mule team, with room to spare; so I divided the train, going to the new ferry, about forty rods below the old one, myself with Mr. Lanter, an assistant wagonmaster, while Mr. Beery went to the old ferry. Just as the first wagon got on the ferry, I noticed that the old boat was on the south side and Beery was calling the ferryman. As we were about shoving off, the man who ran the old ferry called to me not to attempt to cross wagons on that (the new) ferry; if I did, he would cut the rope and send me down the river; and suiting the action to the word, he caught up an ax and started at a run for the big cottonwood tree where the rope was fastened. We were now in the stream and rapidly nearing the south bank. Standing on the front of the boat with pistol ready, I warned him to stop, and that if he attempted to cut the rope, I would surely kill him,

The boat landed and he stopped within ten feet of the tree. I ordered him back to his boat, at the same time asking him what he meant. He declared that the Frenchman

had no charter to run a boat, hence, no right, while he had a charter from the Territorial Legislature for fifteen years. On the other hand, the Frenchman claimed that the Dela-



MAJOR-GENERAL JOHN BUFORD.*

wares owned the land on the north side, and had just as much right to land on the south side without any charter as the other fellow had to land on the Delaware reservation,

*John Buford was born March 4, 1826, in Kentucky, and graduated from the Military Academy at West Point in 1848. He was then promoted brevet second lieutenant of the First Dragoons, and the next year second lieutenant of the Second Dragoons. In 1853 he became first lieutenant, and in 1859 cap-

over which he claimed that the Legislature had no jurisdiction. I ended the controversy by telling the Frenchman to cross all the wagons he could, and that I would protect him. I told the old ferryman to get his boat in motion quickly or I would run it with my men, and that the ferry which crossed the most wagons would get the most money. As to their quarrel, they could settle that before the courts or any other place — I knew nothing, nor did I care anything about their rights or the law; here were two ferries, and I was going to use them. I had the teamster of the first wagon drive close to the tree and told him to shoot any one attempting to approach it; and he, that same gentle, quiet, nervy "Bill" Curran, would have done it if necessary. Then I got aboard the old ferry and gave the ferryman one more chance to run his own boat, and just as I was about to let go, he and his man jumped on. He was sulky and threatened to report me to Colonel Cook at Lecompton. I cut him off short with the answer, that I did not care a — what he did, so that he lost no time with the ferry; and I told Beery to push things with the new ferry, while I stayed with the old one. All worked with a will, but the old ferry lost two

tain of the same regiment. In 1861 he was appointed major in the Inspector General's Department, brigadier-general of Volunteers in 1862, and major-general of Volunteers on the 16th December, 1863. He died in Washington a few minutes after his major-general's commission was placed in his hand.

There are no names upon its honor-roll in which the American cavalry feel a keener and a juster pride than in that of General Buford. He was an example to emulate from the beginning to the end of his brilliant but too short career. He died at the age of thirty-seven.

From the date of his graduation until the outbreak of the Civil War he was constantly and actively engaged with his regiment on the Western frontier in various Indian wars, the Kansas disturbances, and the Utah expedition. As an inspector he remained on duty about the defenses of Washington during the first year of the war, but was then assigned to the duty his active spirit yearned for—the command of cavalry in campaign. He was severely wounded at the second battle of Bull Run, but in less than a month was back on duty as chief of cavalry in the Army of the Potomac in the Maryland campaign. A history of this cavalry is a history of Buford from the time he joined it till he was borne away from it to die of a brief illness.

Buford chose the field for the battle of Gettysburg, and with his cavalry division held back Heth's Confederate infantry division until General Reynolds arrived with his corps. The Union owes to him, more than to any other man, its victory at Gettysburg.

trips to start with, and in the end the new ferry had six wagons the most. All, more than seventy wagons, were crossed in time to camp south of town before dark, whereas without the new ferry half of them would have camped in the bottom north of the river.

The next day, after finishing my business at the camp at Lecompton, I called at Colonel Cook's headquarters, as I always did before leaving his camp, and there was the complaining ferryman. Having finished his business with me, the Colonel said that Mr. ——— had made serious charges against me. I asked what they were, and the Colonel told the man to state his case in my presence. He did so with a good deal of feeling, but substantially correct, and I so admitted. "Well, what did you do it for?" asked the Colonel severely. I then stated that being in charge of a train-load of supplies for troops in the field, some of whose rations and forage would be exhausted the next day, I came to a river where I had been in the habit of using the ferry, and found another one complete and ready for use. Knowing nothing of any one's rights, and caring for nothing but to use all the means within my reach to get across with the least delay, I had used both ferries, and in doing so was obliged to treat Mr. ——— very harshly; and if he thought I would permit him to cut the ferry-rope and send me sailing down the Kaw River he was much mistaken; and if he ever attempted it again, he would fare worse. "Well, what have you to say to that?" asked the Colonel, turning to the ferryman. The man bristled a little in a loud voice, when the Colonel said, "Stop, sir, stop! You are a — fool, and I will give you this advice: never try such a thing again on a good soldier. Mr. Lowe seems to know how to move trains to supply troops in the field—that is what he is employed for." The man left, and the Colonel remarked that he did not think I would have any more trouble with that fellow; to which I replied that I did not think he would "balk" again. This made the Colonel smile, and "balk" became a by-word among the officers, applied to any one who failed to move freely when told to do anything.

I crossed many times afterwards, and each ferry worked its best for the most money. The Frenchman generally captured the best of it by two or three wagons. The Frenchman kept the approach to his ferry in perfect shape, so that there would be no delays, and the old ferryman kept up the competition—result, a great saving in time and talk.

I saw John Brown but once. He came walking into Lawrence, looking like a shaggy lunatic. The class of people who shouted for "Captain John Brown" were the negative characters, always ready to be mixed up with any kind of notoriety, though not amounting to anything themselves. The substantial, thinking portion of the populace looked on, shook their heads, and, if they expressed themselves at all, it was an expression of contempt for that class of people. Brown was no hero among them, but was looked upon as a disturbing element. I never expected him to gain any respectable notoriety, and he did not in the Kansas War; and if he had not made the Harper's Ferry raid and been executed therefor, he would soon have been forgotten, or remembered only for his crimes. I do not know of one generous, manly, high-minded act that he did in Kansas, nor one for which he deserved honorable remembrance. On the other hand, his ranting lunacy and bad advice caused many murders on both sides. He was so wrapped up in the idea of the freedom of the slaves, that with others of like ilk he did not hesitate to steal negroes from their masters in Missouri, and this always justified him in stealing provisions for them to subsist upon, and transportation to carry them off. Many poor "darkies" were taken from homes against their better judgment through the persuasion and semi-coercion of the disturbing element who came to Kansas in the name of freedom, and made themselves notorious as border robbers and thieves. This element, with that which came from Missouri to carry the elections and override the will of the genuine settlers, together with the political adventurers, caused all the trouble. No better people ever settled a State than those who came to Kansas to make homes.

A young man, well dressed and well mounted, rode one evening into my camp west of Little Stranger Creek, and told me of a terrible battle that had been fought between Big Stranger and the home of Tonganoxie, a Delaware chief, about half-way between Leavenworth and Lawrence. Though he was not a participant in the battle, he thought his information correct. He said I should find dead men scattered about in considerable numbers; that the Free State and Pro-Slavery forces had met there, etc. A few words about this young man. He took supper with me, fed his horse and slept in my tent, and after breakfast left for Leavenworth, promising to take my advice and leave Kansas, which he did; but after peace was declared he returned, went to Denver and Montana, came back, drifted into the cattle business, became a millionaire, raised a prominent family of worthy people, and died in Kansas City a few years ago. He was always thankful that he had kept away from Captain Miller's band of "peace makers," allied himself with good men and led a good life.

The next morning at a point two miles east of Tonganoxie's house, at a place now called Moore's Summit, after the Hon. Crawford Moore who owned a large tract of land there, I found lying in the road a dead man, about thirty years old, dressed like a respectable mechanic. He lay upon his back, pockets turned out as if he had been robbed, a small bunch of keys near his trousers pocket. He had been shot twice, the last time evidently after he fell, in the top of his head. Evidently a number of horses and men had been there, but after riding in a circle a long distance round, I failed to find another body. Captain Sacket came along and had the body buried. I related the circumstance of finding the dead man, as I went through Lawrence, but no one knew who it was.

On my return a man met me at the ferry on the Lawrence side, G. W. H. Golding by name, and stated that he and three others, Roberts, Zimmerman and Brown (not John) had been driven out of Leavenworth on account of their open confession that they wanted Kansas to be a free State. Golding was a gunsmith, Roberts a carpenter, Brown

and Zimmerman other trades. All had worked at their respective trades and had not been mixed up in any difficulties. They had been notified to leave, and had started to walk to Lawrence. When near Tonganoxie's house, a mounted company of fifty or more men made them prisoners. They told their story and were damned as Abolitionists. Everybody who wanted to live in a free State and wanted Kansas to be a free State for that reason, was denounced as an Abolitionist and a dangerous character. The percentage of Abolitionists among the Free State men was very small. The sentiment of nearly all men from Northern States and many from Missouri and other Southern States, was in favor of making Kansas a free State. They did not care to meddle with slavery where it existed, but wanted the new State free, where they hoped to make homes, because they believed it best for themselves and families. I met men from Kentucky, Georgia, Virginia and Maryland who wanted Kansas to be free, and they were among the best settlers.

The captain of the troop of rangers who captured these men did not want to be encumbered with them, and concluded to leave them at Tonganoxie's house under guard, and four men volunteered to guard them. Tonganoxie had gone off, as many others had, to remain away until the troubles were settled. These four guards with their prisoners took possession of the house. About midnight they started under pretence of taking the prisoners back to Leavenworth, but really to find an excuse for murdering and robbing them. The prisoners were required to walk, one on the right side of each of these mounted men, and at a signal all were shot at. Golding was shot near the left ear, the bullet ranging downward. He fell and bled profusely, but lay quiet, nearly choking to death with blood, for fear they would shoot him again. The ruffians felt his pulse and one was about to shoot him again, when another said, "Don't waste your shots; no man ever bled that much and lived." Roberts struggled some and was shot again. Brown lay still; they felt his pulse and pounded him on the head with the butt of a gun. Zimmerman was pronounced dead. All were robbed (they had considerable money), the robbers

riding off at a gallop. Golding supposed his companions dead, turned over and relieved himself of the blood in his throat, found that he could walk, and finally made his way through the prairie and timber, keeping off the road, and got to Lawrence. Hearing that I had found Roberts and no others, made him hope that Brown and Zimmerman might have escaped as he did. It turned out that Brown was not hit by the shot, but fell and lay still, even holding his breath a long time, and the only injury was caused by the blows on the back of his head. He, too, thought his comrades dead and crept away; but he found that the blows on his head had so affected his eyes that he could scarcely see. In this condition he made his way to the Kaw River, living on green corn for several days, until he was found below Lawrence. I do not know what became of him. Zimmerman escaped badly wounded, but recovered. Golding was the first Free State sheriff of Leavenworth County, and was a useful citizen and good officer. He settled in Labette County and died there in 1895. The above is all there was of the terrible battle described by my friend.

To show the character of the four men who committed this outrage, I happened to know one of them personally, and I suppose the others were of like makeup. This one had been a trapper up the Yellowstone, committed one or two murders up there, and had to get out of the country to keep from being killed by other trappers. I hired him to go to Fort Riley in 1855 and discharged him on the road. He returned to Leavenworth and opened up a headquarters for toughs, his apparent business being that of a saloon keeper. Many men told me that it was only a question of time when he would kill me, if he got a chance. Everybody went armed, and, of course, I was not behind others in having good arms and being prepared to use them. One thing I was pretty safe on, I did not visit the town or tough places at night, and never feared that any man would assassinate me face to face. He might waylay me, but that was hard to do in broad daylight, with a man who was always sober and accustomed to care for himself. But his threats caused me to keep the run of him. One day I met him at the corner of

Main and Shawnee Streets; I was going north, as he came round the corner and turned south with a rifle on his shoulder. I stepped to the edge of the walk, drew my pistol quickly and motioned him to continue on south, which he did. Neither spoke. When he got to Delaware Street, he turned west, and I went on north to where my horse was hitched and rode to the Fort. I never saw him afterwards, but heard the next day that he had joined one of the companies of "peace makers."

In the fall, soon after peace arrangements at Lecompton, which destroyed all the business of irresponsible "peace makers," a promiscuous lot of men were assembled in a saloon in Leavenworth, some drinking, some playing cards, talking over the past, conjecturing the future, etc. My "friend" was of the number—swaggering, swearing and bragging—telling of his prowess, and among other outrages he bragged of killing Roberts. "I did not let my man escape," said he. Some Georgians present had come to Kansas to settle, not to steal or rob, but to settle—preferably to make Kansas a slave State, but to settle any way and make the best of it. In the meantime some of them had become so disgusted with the so-called "Pro-Slavery" gangs, as represented by the "peace makers" above referred to and the crowds that came over from Missouri to carry the elections, that they leaned towards the Free State party as representing the better element, and finally some of them concluded to and did act with that party. One of these Georgians, who had been much disappointed and disgusted, now slightly under the influence of liquor, sprang to his feet, rifle in hand, faced the big ruffian and spoke, as reported to me, about as follows: "You scoundrel! you thief! you characterless murderer! You who had nothing at stake, neither character, home, friends, nor hope for the future, you and others like you have roamed this country to our disgrace and the destruction of all that we hoped to build. By murder, arson and robbery you have made us a stench in the nostrils of all decent men. I am going back to Georgia, but for the sake of my comrades who must stay here and struggle for a liv-

ing, I am going to kill you, so die, damn you, die!" And he shot the ruffian dead.

During the Georgian's speech the ruffian had braced himself up, fumbled his pistol and acted as if he was going to use it, but the Georgian had the "drop" and would have killed him any instant that he thought it necessary. A friend of mine who was present told me this two hours after in my camp fifteen miles away, and of the scenes and incidents previous to and following the killing. The Georgian's speech caused a sensation, not only among the tough element, who thinned out a good deal afterwards, but among the better element who had looked with suspicion upon all Southerners who came to make Kansas a slave State. Gradually it dawned upon them that there were good men of the Pro Slavery party who would fall into line and work for Kansas any way, build homes and be good citizens. But the Georgian who did the killing did not return home, but found government employment, went with me on the Cheyenne Expedition in 1857, to Utah in 1858, where I left him, and thence to California. Frugal, industrious and honest, he made all good men respect him. Two of the other Georgians who were in the room when the killing was done, worked for me in government business more than two years, saved their money, and made homes in Kansas. Better men it would be hard to find.

At Lawrence, one of my first acquaintances was Lyman Allen. He was in the stove and hardware business, a genial, companionable man. After crossing the ferries, I always went to his office to write my certificate on which the ferrymen collected their pay from the quartermaster at Fort Leavenworth. So that every time I passed through there, going or coming, I saw him. A few days after peace was patched up at Lecompton, I met Governor Charles Robinson in Allen's office. I had seen him frequently as a prisoner at Colonel Cook's camp at Lecompton, but now made his acquaintance for the first time. Having some leisure, and the Governor seeming to want to talk with me, I remained in conversation with him and Mr. Allen until two distinguished leaders of the Pro-Slavery party came in and introduced themselves to

the Governor, who introduced them to Mr. Allen and me. They talked a little, evidently without any very congenial feeling on either side, and treated each other courteously for a few minutes, when the visitors rose to go. After shaking hands reservedly all around, one of them turned to the Governor and said that he had lost a negro man, and had reason to believe he was in Lawrence—he had the man in camp during the campaign and some one had stolen him. He asked the Governor if he had heard of such a man, describing him, to which the Governor replied that he had not. The other man said: "Well, if the nigger does come under your notice, I wish you would try to save him for me," to which the Governor replied: "Well, if I see him." And the gentlemen were off. After they went out the Governor turned to me and said, that he had been informed that each of these two men had declared that they would shoot him on sight, "And now," said he, "they come in here to inquire after a runaway negro, and while both are armed and I am not, neither acts as if inclined to shoot." These men, then young, were among the wealthiest in Platte and Buchanan Counties, in Missouri; both were Union men during the War of the Rebellion, one was a colonel, several terms a congressman, and died a congressman from the St. Joe district in Missouri—one of the ablest men from that or any other State. And so the change referred to by Governor Robinson was not so great, in the light of what followed. When Robinson became governor he made his friend Lyman Allen Adjutant General of the State.

Lieutenant Stuart, acting commissary officer at Fort Leavenworth, found himself with 400 work oxen on hand in the fall of 1856, turned over to him by the quartermaster to be fed for beef. He employed me to take them to Platte County, locate them, buy feed for them, etc., and I was transferred to the commissary department for that purpose. I placed them on the farm of Mr. Daniel Carey, near which I had been the winter before. In the spring of 1857 the oxen were very fat. I had spent a pleasant winter with nice people, and the last of April I returned the cattle to Salt Creek Valley, transferred back to the quartermaster's depart-

ment, and began fitting up trains for the Cheyenne expedition to be commanded by Colonel E. V. Sumner, First (now Fourth) Cavalry, with Lieutenant J. E. B. Stuart, acting quartermaster and commissary of the expedition. Of this campaign, in which I was master of transportation, I will tell in my next paper, so far as it came under my observation.



THE ORGANIZATION OF A SCOUT AND SHARPSHOOTER CORPS.

BY CAPTAIN ALONZO GRAY, FOURTEENTH CAVALRY.

FOREIGN armies, to a much greater extent than the American, have organized special corps, which are valuable only in time of war or public danger, or in extended maneuvers. I do not know of any corps organized for the combined purposes indicated in the above heading.

Our army had, and still has, many scout organizations, whose members have no shooting qualifications. During the War of the Rebellion, it had many sharpshooters, without reference to their scouting qualities. It also had individual scouts who were fine shots.

It would seem that a corps organized and trained in time of peace, which combines both of these qualities, would be especially valuable in time of war.

ORGANIZATION.

I would organize this corps into twelve companies of fifty men each, exclusive of commissioned officers. As seldom more than one company would operate together, the battalion organization might be omitted. I would, however, have three majors who would act as chiefs of districts in which three or more companies of scouts might be operating. A colonel and staff should also be appointed, who should look after the equipment and supply. The company officers should be chosen with reference to their abilities, being young enough to be energetic and active, and yet old enough to have some experience; and they should be able to impart the necessary instruction.

The enlisted men before joining this corps should have

the necessary disciplinary training, preferably two years in the line. They must be good horsemen, and for that reason would mostly, but not necessarily, come from the cavalry service. The men should first have the disciplinary training, because, in this corps, discipline would be enforced, but not taught.

On many cattle ranches a discipline sufficiently rigid is enforced, so that many recruits might be drawn from this source.

All men transferred to this corps should have attained the sharpshooter's grade before being transferred, unless they possessed some special qualification. In this case, they might be let in with the marksman's grade. In no case should a poor shot be allowed in the corps, no matter what his other qualifications were. Some system of examination should be pursued to ascertain a man's qualifications. The candidate should be able to read and write fluently, but, as many men could not do themselves justice by a written examination, an oral examination is all that should be required. No maximum age-limit should be set so long as a man preserved his acute mental faculties. Age usually brings experience.

This organization would differ from the Philippine Scouts in that it would not be intended for garrison purposes. The companies might be allotted to different departments, and, if necessary, temporarily broken up but not disorganized.

PAY.

As the members of the corps would require special qualifications, the pay should be larger than the pay of corresponding grades in the line. Privates should get \$18.00; corporals, \$20.00; sergeants, \$25.00; first sergeants, \$30.00; and in addition to this, the usual increase for length of service, and for foreign service. This increase of pay would be an additional incentive to men of high qualifications to join the corps. The principal inducement, however, would be the love of adventure which pervades the entire nation.

UNIFORMS.

This corps should have a special uniform, and of the least conspicuous of all known colors. One of the most important duties of this corps would be to see and not be seen. The test of color should not be made upon a body of troops marching in the distance, but upon the appearance of the color in the grass, in the bush, on the water, when seen at night, in the woods, or against snow.

Some conclusions can be drawn from the color of wild animals. The tiger is undoubtedly, the most inconspicuous of all; but its color would, for obvious reasons, not be suitable for a soldier's uniform. The color of birds, which depend for their safety on concealment, is found repeated in the prairie chicken, bob white, plover, and numerous other varieties of game birds. This color is the one most suitable for the scout's uniform. Shoes with rawhide soles should be adopted, and canvas leggings only should be worn. Leather usually squeaks, and is therefore unsuitable for leggings. No metallic objects of any kind should be used on the uniform. Buttons and all ornaments and insignia should be of cloth. A suitable device would be a bundle of arrows.

ARMAMENT.

The best rifles should be provided regardless of cost. The new Springfield, model of 1904, if provided with telescopic sights, would be satisfactory. A good automatic pistol should also be provided, if such a pistol could be found. The caliber should not be smaller than forty-five. Caliber should be considered in preference to type.

INSTRUCTION.

The instruction should be noted for its individual rather than for its collective value. The men should be schooled in the subject of procuring information. (The subject of security pertains more to the duty of a sentinel.) They should be taught to lie concealed and watch a column of troops pass, and then to give an intelligent report as to their organization and numbers. They should be taught to ques-

tion countrymen, women, and prisoners; to sift information and separate the true from the false; to trail and to judge the value of signs, such as the tracks of men, animals and vehicles; as well as horse dung, camp fires, the braying of mules, the barking of dogs, etc.

They should learn the military value of terrain and store the knowledge of it away for future use. They should be impressed with the value of localities through which they pass as camp sites for commands of various sizes; and they should remember the value of a piece of country with reference to the facility with which troops can pass through it unobserved.

Scouts should be expert in woodcraft; learn to read the stars, and to ascertain direction thereby, as well as by the moss on trees, the flight of birds, and other natural or artificial signs.

Scouts should know how to find their way in mountains, prairies, darkness, fogs, and blizzards; they should understand swimming and the swimming of horses; they should have a knowledge of the strength of currents, the character of bottoms, and the use that can be made of the approaches. They should also know how to make, at least crude, maps; how to make reports both verbal and written; how to carry messages, and how to destroy, if necessary, those entrusted to them. They will have to know how to live off of the country, how to hunt and fish, how to send signals, how to cut telegraph lines, and, if necessary, how to lie.

Each company should have men of special qualifications, such as telegraph operators, bicyclists, automobilists, stationary and railway engineers, electricians, railway men, linguists, etc.

USE.

The men of such a corps would probably be used in time of battle out in a thin line well to the front, and drawn in when the shock of battle came, and then used as messengers between different parts of the line. They would, as their name implies, scout well to the front, obtaining information of the enemy, bringing in the necessary reports. They might

be used to hang on the enemy's flank and annoy his march. On their reports would largely depend the general's plan of battle, and very probably the success or defeat of his army.

A partial test could be made by organizing and training one company at Fort Riley, and then using it during the field maneuvers. Time should be allowed for thorough instruction before a satisfactory test could be had. If this test should prove satisfactory, then a school of instruction should be established there, where all scouts should be trained before going out for serious work.

MALABANG, MINDANAO, P. I.,
July 28, 1904.

AN UMPIRE AT THE ARMY MANEUVERS.

BY MAJOR GEORGE H. MORGAN, NINTH CAVALRY.

AS the JOURNAL is only read by professional men, I may not be misunderstood when stating that it is worth twenty years of peace to feel the joy of entering into a real campaign with a command of real soldiers, fully organized, equipped and drilled by or directly under one's self.

This joy is tempered, if any of the conditions are unfulfilled, and any officer who has omitted from his calculations that he must expect to be judged as if he were thus perfectly equipped, has either had no experience, has not studied history, or is too sanguine for real work in this world.

There can be no better test to apply to our Regulars or to the organized Militia than the test of simulated war as found in the big maneuvers, as everything up to the point of actual contact may be made as real as the same thing in war itself. The game comes in when we meet the human equivalent of bullets, the umpire; and here at the point of contact is where he ought to be met.

General Bell on the 7th of September or General Grant on the 9th of the same month, during the late maneuvers near Manassas, Va., were not, probably, considering the umpire to the exclusion of all other factors of the problem in hand; and yet, the success of the movement was, under the rules, dependent upon the rulings of the umpire, or upon the importance he might attach to an imaginary division to be placed at any reasonable time in any reasonable position by the division commander.

To illustrate the importance of the study of the genus umpire: On the 6th of September, a troop of Brown cavalry

was enabled to approach a small body of mounted men of the Blue division accompanying a battery of artillery. The Brown troop was dismounted, under cover, to fight on foot, was placed on the edge of a wood within 150 yards of the enemy, delivered four volleys with deliberation, mounted and got away without trouble. Within a half-hour the attack was renewed "cavalry" fashion. The Brown troop was formed, as before, without the knowledge of the enemy, at the edge of a wood, and burst, mounted, out of the cover, within fifty yards of the battery unprepared. The command of the troop commander, "As foragers, Charge," was probably the first intimation the battery commander had of its presence.

The umpire with the battery was not much impressed by the earlier attack, as he judged the Blue loss to be five men. From the second and faulty attack he adjudged a loss of one third to the battery. I was compelled to give a loss of seventy-five per cent. to the troop, as it unexpectedly ran into a heavy infantry support. The troop commander, of course, thought his action was justified. He had been with troops at maneuvers before, and his judgment may have been better than mine, of course; and this brings me to the point of this paper.

Granted that subordinate commanders have a chance to get a practical exhibit of the smoothness in work of their machinery at maneuvers, should we add the missing factor of danger, by encouraging the cavalry charge or, as has been suggested, by giving each side a few ball cartridges?

In my opinion, there was no question as to the relative efficiency of the two attacks as described above. Why not consider it a game to the extent that if a commander of cavalry gets his force into a position where he considers a charge practicable and desirable, he may "form for attack" and move over about half of the intervening space necessary to be covered, were the attack real, in order that there may be no misunderstanding as to the direction of the attack? Then require him to halt and await the judgment of the umpires. There can be no question as to the dramatic appearance of a cavalry charge, but it has an element of danger to

the attacked, which may well be omitted. The control of cavalry is better illustrated to a cavalry umpire, by checking it in full career, than by running it over the opposing infantry.

The umpires with the cavalry at Manassas were too few. Perhaps due to inexperience, the work was hard and still unsatisfactory to the extent that all of the ground was not covered. The number of officers for this duty should only be restricted by the extent of the available funds. An officer cannot much better get real experience in real war.

The one fact, that there is no real danger from bullets, detracts, in so much from the value of the experience; and some commanders may be unnecessarily rash and daring. This kind of valor must be controlled by the umpire.

The relief, to a veteran with nerves, after the first shock when the point receives the warning that it is expected to stop, and his heart drops back from its extraordinary position, realizing the futility of its jump, may tend to enthusiasm.

It may be proved that it would save lives in a century of war, were we to mix a few real bullets with the harmless (beyond twenty-five feet) blanks; but all classes are not educated up to this point as yet. We must, probably, go on for a few years really enjoying the hard work incident to the army maneuvers because of the joy of being fearless.

But what lesson could the cavalry get at Manassas? The cavalry at the disposal of the division commanders was so inadequate that one might well imagine one's self at the outbreak of a real war and, of course, on the first line. Each side had, on paper, about a regiment of cavalry, but the troops were skeletons, hardly forty troopers each, while the infantry regiments were generally in full strength.

The officers and men of the cavalry were generally well trained in the special work of outpost and contact duty. They took cover well, and were bold and efficient in gaining knowledge of the enemy's movements, etc.; but their numbers were such that they could offer no real resistance to the advance of the heavy infantry lines. The infantry lost in experience from this very fact.

My final conclusion was that under the conditions of the problems, the attacking force in each case should necessarily win; but could one side have replaced an infantry regiment by a full war-strength regiment of cavalry, the preponderance of cavalry must have insured its victory.

A RESERVE FORCE.

BY CAPTAIN ROBERT D. WALSH, NINTH CAVALRY.

ALL governments recognize the advantage of limiting the number of soldiers serving with their regular armies to the minimum commensurate with the public safety. With a small army the expense of maintenance is less, and the number of producers, and consequently the wealth of the country, is greater than they are with a large army. From this arises the importance attached to reserve troops, who, well trained and disciplined, are producers in peace, and in war, soldiers. In our service, the cavalry and field artillery are more closely interested in this subject than the other branches, for it may be said that the number of these troops in the National Guard is so small that they would receive little increase from this source in time of war.

Until the declaration of hostilities between Russia and Japan, we might say that only the Atlantic States were subject to invasion, and that the navy would constitute our first line of defense. The showing made by Japan has been so remarkable that she must be classed as a world-power, even if defeat should be her lot in the present struggle; and henceforth we must look to the Pacific as well as to the Atlantic coast as a direction from which we may be menaced. It is true that the Japanese and ourselves are good friends, but even brothers have been known to become estranged, and fifty years hence historians will possibly write that England and the United States were more concerned in the present war than Russia. In any event, to estimate the true strength of our navy we must consider it divided into two parts: the Atlantic and the Pacific fleets. If our navy were as great as that of England, our land forces would occupy a

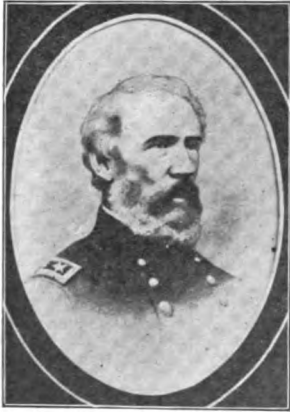
seemed necessary to keep United States troops in camps and on the move as protection to good citizens of both parties and to keep the threatening columns apart. United States troops were stationed near Westport, Franklin, Prairie or Baldwin City, Lecompton, etc. These camps were headquarters from which troops could move quickly when necessary, and must be supplied every ten days with forage and provisions. Something like 100 wagons were required for that purpose, and I was detailed by the quartermaster, Major Sibley, to look after them. Most of the supplies went by Lawrence, crossing the ferry there, when the wagons for Franklin were sent off under an assistant wagonmaster, those for Baldwin City under another, and those for Lecompton, the largest command, under another, etc.

After crossing at Lawrence I generally went on to Lecompton, ten miles, and after finishing there, rode across country to other camps if necessary, returning to Lawrence about the time the wagons from different points reached there, and then to Fort Leavenworth for another ten days' supply. While the teams were not overworked, I was very much so. I never worked so hard and so continuously from May to October as I did this season; five months of exposure and overwork, which would have ruined any man of weak constitution; and it nearly ruined me.

The last trip I started on was with a train of supplies for some troops opposite Topeka. Having delivered them I was to ride across to Lecompton and then to Lawrence. The train under Mr. Beery started early, but I did not get off until afternoon. I was ill enough to be in bed, but said nothing of it. I rode alone, and was so sick that I could scarcely sit my horse, and afraid to dismount lest I could not mount again. In this condition I arrived at a house on Stranger Creek, east of the crossing near Easton. I did not know the people, but dismounted, staggered into the house, and was unconscious. About 8 o'clock the next morning I opened my eyes and recognized the woman standing over me bathing my temples and forehead as the one I had seen when I dismounted. I felt a little light headed, but my

mind was clear. I imagined, however, that I had been there three days, from Tuesday to Friday.

The supplies in the train were for two commands some distance apart, and I had the papers, invoices, number of wagons to go to each place, the contents of each wagon, etc. The wagonmaster knew nothing about the distribution of goods, and, if this was Friday, they were a day behind and there would be confusion. However, I soon learned that my idea of the time I had been there was but a delirium,



GEN. EDWIN VOSE SUMNER.*

and this was Wednesday morning. I had been there from 5 o'clock Tuesday to 8 o'clock Wednesday. This good woman had watched over me all night. Mr. and Mrs. Martin Hefferlin were the people, and I might have died but for their kindness. My fever lasted nearly all night, during which I was quite violent, requiring close attention; and now I was nearly helpless, but my mind was clear. I inquired what time the stage for Fort Riley would pass, and Mrs. Hefferlin said in about an hour. I bundled up my papers and memorandum book, wrote a short explanation and gave it to the stage driver, whom I happened to know, and who promised to give them to the wagonmaster. I found I could not ride, and returned to the fort with Lieutenant Buford (afterwards General Buford) who was en route

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secondary position. But now, with all other navies practically concentrated and ours divided, the army must be considered our main reliance to defeat invasion.

In view of recent treaties between great nations, a word may be permitted on arbitration which is now prominently advanced as a preventive of war. Arbitration is as old as justice and has been employed at all periods of the world's history. While in Judea Pompey appointed a commission to settle disputes between the Armenians and Parthians. Even during the time when all men were soldiers, in 1294, Pope Boniface VIII. acted as arbiter between the kings of France and England. When President Jefferson first assumed office, he believed it possible "to introduce between nations another umpire than arms," and that the army and navy were unnecessary. He, however, sanctioned the maritime war against Tripoli, and lack of preparation alone prevented hostilities following the attack of the *Leopard* on the *Chesapeake*. At the beginning of Jefferson's first administration, the war with France being at an end, twenty-one vessels belonging to the navy were sold. During his administration it became necessary to establish navy yards, to add sixteen vessels and sixty-nine gun boats to our fleet, to add six thousand men to the army and to increase the personnel of the navy from 1,400 to 5,000. Such was the experience of one of our own Presidents, who held the theory "that wars were unnecessary and that other means could be found by which nations could settle their differences."

Nations are not as prone to plunge into war as formerly. This is not due to a change of sentiment. The deadly nature of warfare, owing to improvements in arms and the machinery to destroy life, the great cost of war and loss of prestige to the conquered, cause nations to think many times before declaring hostilities. These improvements have shortened the period of warfare, and are the strongest possible argument that our first line should be strong enough, at least, to delay the enemy, until our full fighting strength can be developed.

Our present fighting strength, infantry, field artillery and cavalry, may be estimated at 44,000. Deducting the troops

serving in the Philippines and Alaska, the number of troops which could be put in line of battle would not exceed 30,000. This number is not sufficient to meet an invading army, and with our long sea-coast line we could not prevent that army's landing. In these days of modern transportation, transports carrying each two, three and four thousand men, would form part of the enemy's auxiliary fleet. Water transportation is now the quickest means of moving an army with its supplies. If a railroad line across the Atlantic were in the hands of our opponent, it would be subsidiary to transportation in steamships. The Militia must be moved up a notch and constitute our first line of defense, or that line must be strengthened in some other way. The expedient of filling our Regular companies to the maximum when war is declared simply weakens them at a time when their full strength is most required.

All countries in which large standing armies are maintained increase the number of men available for immediate duty by retaining the soldier in service after his time of active duty has expired. In the German empire a soldier serves first with the colors, then with the reserve, and then with the landwehr or second reserve. All countries which recruit their armies by conscription have adopted a similar system. In the United States no attention is paid to a soldier after his enlistment has expired, though every year large numbers of men are discharged who, if organized, would constitute an efficient force. Soldiers who do not re-enlist would often be willing to do so at the prospect of active service, and, if their addresses were known, it would be feasible to organize them into companies and regiments. The argument may be advanced that these men will be found serving with regiments of Militia or Volunteers upon the outbreak of war, and that they will be of great utility in these regiments. I think it will be found that only a small proportion served in the Spanish War. They believe that their knowledge of military life and former service entitle them to some consideration in the appointment of commissioned and the higher noncommissioned officers. Such consideration is seldom shown them.

To illustrate more clearly: Private Lewis Baldwin, Com-

pany K, First Infantry, is discharged by expiration of his term of enlistment. He does not reënlist, but would be glad to do so in the event of war. He selects Philadelphia as his place of residence, goes before the recruiting officer in that city and takes an oath of enlistment to serve in the Reserves for the period of three years. He thereby pledges himself in case of war to serve as a soldier the remainder of his enlistment or be considered a deserter. He is then assigned to a company and regiment, and reports at the headquarters of his organization. He is to report in person or by letter at stated times and to notify his captain of any change in his address. Should his new residence be distant from his former one, he may be transferred to another regiment, or his orders may be complied with by his reporting on the outbreak of hostilities at any one of certain designated places—the object being that the individual may not be hampered in any way in his civil life, and that when needed the Government may have a trained soldier ready to enter the ranks.

As a recompense Private Baldwin is annually paid \$20. In addition, the headquarters of the regiment is fitted up as a regimental club, with reading rooms and a gymnasium. A discharged soldier of good character joining a Reserve regiment would find himself among friends. Men in search of employment would be assisted by their comrades, and the chances of a discharged soldier's making a success in civil life would be increased. That there is a tendency among discharged soldiers to band together, is shown in the formation of the posts of the Grand Army, of the societies of the Spanish-American War, and in the formation of the garrisons of the Army and Navy Union. With the Government's assistance these Reserves should become efficient reserve organizations, and the total cost would be about equal to what economical Switzerland pays one of her militiamen. To ensure success the service should be made attractive, and the Government should render the assistance required to make it so.

The field officers and one-half of the captains should be detailed from the regular service. The latter from among the lieutenants, and the field officers from grades above that

rank. By detailing half the captains from the regular forces they would bring to a reserve regiment the newest methods and customs of the service. The detail of this number of officers from the regular forces may properly be objected to as reducing still further the number of officers for service with their proper regiments. This is a valid objection, but one which cannot be considered in the present article. It may, however, be suggested that the depletion of regular regiments of officers for various staff and other duties, for which in our service there appears to be no remedy, might be compensated for by the appointment of a sub-lieutenant in each organization to hold his commission for a limited period and to be appointed from the enlisted men of the regiment. All remaining officers of the reserve regiments should be selected from among its members, there being a limit as to the time they should hold their commissions—this with a view to retaining comparatively young men as company officers. Noncommissioned officers should also be appointed. In fact, a reserve regiment should be so prepared that it would be ready to move with only short notice.

In time of peace one of the field officers should be in command of the regiment and in charge of its headquarters. He should be assisted by a sufficient enlisted force to perform the clerical work and properly care for the headquarters, gymnasium and reading rooms.

Twenty-six years may be taken as the average age at date of discharge of soldiers serving their first enlistment, and twenty thousand of these men are discharged yearly. Only those of good character should be permitted to serve in the reserve. The average soldier should be capable of rendering service up to forty years of age. Perhaps the greater portion of discharged men reside permanently in cities, but the regimental headquarters while situated in a city, should embrace the surrounding territory, or in some cases the entire State.

It is not proposed to enter into full details as to the formation of these regiments. Whether they should be issued arms and uniforms, take part in maneuvers, what service they should render annually, what should be the qualifica-

tions of officers, etc., etc., can only be determined by experience. It is certain that discharged soldiers now form clubs for social amusement and mutual benefit, and it is believed that this tendency, properly fostered by the National Government, would result in the formation of a well drilled and efficient reserve. It is, however, useless for the Government to ask service without giving in return a recompense.

As to the number who would enroll themselves, perhaps one in five would do so, perhaps one in seven. It is believed that 30,000 would be about the ordinary number, which would give a force equal to that our Regular Army could put in the field. An army of 60,000 would still be small numerically to oppose an invading army, but it would be better than 30,000.

REMOUNTS.

A PLAN FOR PROVIDING SUITABLE HORSES FOR CAVALRY AND ARTILLERY PURPOSES.

BY MAJOR LOYD S. McCORMICK, SEVENTH CAVALRY.

THIS important subject has for a number of years engaged the attention of all European nations. In most of them the fact is recognized that some inducement is necessary in order to keep the supply up to the standard, and equal to the demand. Different nations have adopted different methods in order to accomplish these results; but all the methods have in view a means by which the government may readily supply itself with the animals needed under the ordinary conditions of peace, and also equip itself in this respect, when preparing for war, more promptly and with more serviceable horses than it could, if their breeding should be left to the accidental results which follow the course adopted by the great majority of farmers, from whom nearly all horses must be originally obtained, unless the government should raise its own horses.

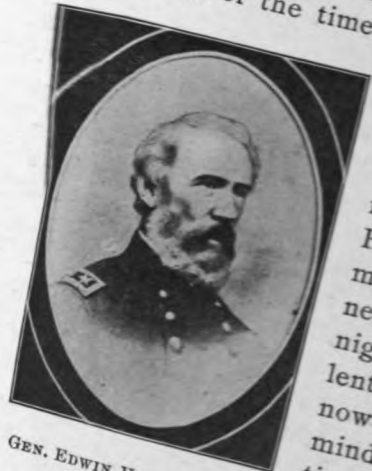
That the mounted branches of the European armies have greatly profited by this encouragement on the part of their governments, is well established by the reports of officers who have had a chance to see the public horses of these nations and observe their performances in the field. With such proofs in front of us, it seems strange that the United States have never made any effort to encourage the breeding of an animal suitable for either cavalry or artillery purposes. As to original cost the horse is far ahead of any item of individual equipment; and when his daily expense is added to that original cost, there can be no question as to his being by far the most expensive article of our equipment, except, of course, heavy guns. Why then should the supply be given

seemed necessary to keep United States troops in camps and on the move as protection to good citizens of both parties and to keep the threatening columns apart. United States troops were stationed near Westport, Franklin, Prairie or Baldwin City, Lecompton, etc. These camps were headquarters from which troops could move quickly when necessary, and must be supplied every ten days with forage and provisions. Something like 100 wagons were required for that purpose, and I was detailed by the quartermaster, Major Sibley, to look after them. Most of the supplies went by Lawrence, crossing the ferry there, when the wagons for Franklin were sent off under an assistant wagonmaster, those for Baldwin City under another, and those for Lecompton, the largest command, under another, etc.

After crossing at Lawrence I generally went on to Lecompton, ten miles, and after finishing there, rode across country to other camps if necessary, returning to Lawrence about the time the wagons from different points reached there, and then to Fort Leavenworth for another ten days' supply. While the teams were not overworked, I was very much so. I never worked so hard and so continuously from May to October as I did this season; five months of exposure and overwork, which would have ruined any man of weak constitution; and it nearly ruined me.

The last trip I started on was with a train of supplies for some troops opposite Topeka. Having delivered them I was to ride across to Lecompton and then to Lawrence. The train under Mr. Beery started early, but I did not get off until afternoon. I was ill enough to be in bed, but said nothing of it. I rode alone, and was so sick that I could scarcely sit my horse, and afraid to dismount lest I could not mount again. In this condition I arrived at a house on Stranger Creek, east of the crossing near Easton. I did not know the people, but dismounted, staggered into the house, and was unconscious. About 8 o'clock the next morning I opened my eyes and recognized the woman standing over me bathing my temples and forehead as the one I had seen when I dismounted. I felt a little light headed, but my

and was clear. I imagined, however, that I had been there three days, from Tuesday to Friday. The supplies in the train were for two commands some distance apart, and I had the papers, invoices, number of wagons to go to each place, the contents of each wagon, etc. The wagonmaster knew nothing about the distribution of goods, and, if this was Friday, they were a day behind and there would be confusion. However, I soon learned that my idea of the time I had been there was but a delirium, and this was Wednesday morning. I had been there from 5 o'clock Tuesday to 8 o'clock Wednesday. This good woman had watched over me all night. Mr. and Mrs. Martin Hefferlin were the people, and I might have died but for their kindness. My fever lasted nearly all night, during which I was quite violent, requiring close attention; and now I was nearly helpless, but my mind was clear. I inquired what time the stage for Fort Riley would pass, and Mrs. Hefferlin said in about an hour. I bundled up my papers and memorandum book, wrote a short explanation and gave it to the stage driver, whom I happened to know, and who promised to give them to the wagonmaster. I found I could not ride, and returned to the fort with Lieutenant Buford (afterwards General Buford) who was en route



GEN. EDWIN VOSE SUMNER.*

*Edwin Vose Sumner was born in Boston in 1797, and educated at Milton Academy. He was appointed second lieutenant of the Second Infantry in March 1819, became first lieutenant in 1823, and was promoted to captain First Dragoons (now First Cavalry) at the organization of that regiment in March 1833. In 1846 he was promoted major Second Dragoons (now Second Cavalry), and in 1848 lieutenant-colonel First Dragoons; and when the First Cavalry (now the Fourth) was created in 1855, he was appointed its colonel. He was appointed brigadier-general in March, 1861, and major-general of volunteers in June of the same year. He died in March, 1863. He distinguished himself in the Black Hawk War, and took part in numerous expeditions against Indians. He participated in every engagement of General Scott's army in its advance

tions of officers, etc., etc., can only be determined by experience. It is certain that discharged soldiers now form clubs for social amusement and mutual benefit, and it is believed that this tendency, properly fostered by the National Government, would result in the formation of a well drilled and efficient reserve. It is, however, useless for the Government to ask service without giving in return a recompense.

As to the number who would enroll themselves, perhaps one in five would do so, perhaps one in seven. It is believed that 30,000 would be about the ordinary number, which would give a force equal to that our Regular Army could put in the field. An army of 60,000 would still be small numerically to oppose an invading army, but it would be better than 30,000.

REMOUNTS.

A PLAN FOR PROVIDING SUITABLE HORSES FOR CAVALRY AND ARTILLERY PURPOSES.

By MAJOR LOYD S. McCORMICK, SEVENTH CAVALRY.

THIS important subject has for a number of years engaged the attention of all European nations. In most of them the fact is recognized that some inducement is necessary in order to keep the supply up to the standard, and equal to the demand. Different nations have adopted different methods in order to accomplish these results; but all the methods have in view a means by which the government may readily supply itself with the animals needed under the ordinary conditions of peace, and also equip itself in this respect, when preparing for war, more promptly and with more serviceable horses than it could, if their breeding should be left to the accidental results which follow the course adopted by the great majority of farmers, from whom nearly all horses must be originally obtained, unless the government should raise its own horses.

That the mounted branches of the European armies have greatly profited by this encouragement on the part of their governments, is well established by the reports of officers who have had a chance to see the public horses of these nations and observe their performances in the field. With such proofs in front of us, it seems strange that the United States have never made any effort to encourage the breeding of an animal suitable for either cavalry or artillery purposes. As to original cost the horse is far ahead of any item of individual equipment; and when his daily expense is added to that original cost, there can be no question as to his being by far the most expensive article of our equipment, except, of course, heavy guns. Why then should the supply be given

so little consideration, when by a moderate amount of encouragement we should have in the United States the finest army horse in the world? It isn't that he is considered an unimportant factor in our army, for nothing is written or said to substantiate that idea.

Without cavalry and artillery able to live under the hardest and most wearing service, an army is almost helpless when not besieged; and that is not the condition to be considered. Of two opposing armies, equal in all other respects, the one with the best cavalry and artillery will, in all probability, win the battle; and in the pursuit, will be able still further to cripple the one with weak and broken down horses. A comparatively small mounted force can, then, more than repay its government for any reasonable effort that was made to put it on the best footing.

This brings us to a consideration of what is necessary in a good cavalry horse; for this paper will deal more directly with that animal. The description given in paragraph 1142 of the Army Regulations (1901) is that of an almost perfect horse; and if such horses could be readily supplied under existing conditions, nothing more could be desired. When we look for such horses in our ranks they are so scarce that the sample is lost sight of, and we have to satisfy ourselves with an indifferent animal, and wonder why specifications are made when the material supplied under them so rarely follows more than the most salient requirements, and frequently does no more than touch even them. What officer ever joined a troop without a lasting search for even a fairly good mount? I think every cavalry officer has had the experience of serving with a troop in which he could not find a horse with anything but the most back-breaking gaits. The horse probably stumbles once or twice in every hundred yards, and has no ambition not induced by an application of the spurs. And as for appearance, the officer is glad if his mounted duty leads him into seclusion.

I admit that a great many of the traits found in cavalry horses are forced on the animals by their riders, and that it is rare that a well mannered horse is found in the ranks. This, of course, will continue to be the case until the officer

and soldier, particularly the latter, are instructed to such an extent as to realize that the horse is a willing animal and that his best efforts are secured without excitement or abuse. The presence of manners, even if our horses had them, will not, however, altogether compensate for the natural defects of conformation and action so often found. To assure satisfaction in these respects attention must be given to the breeding, and this can only be productive of good results when such attention is regulated by some well proved system. This phase of the matter will be taken up later.

From the results of the present method of supplying our horses, I think it only a fair conclusion, in which I believe all cavalry officers will agree, that the horse described in paragraph 1142, Army Regulations (1901), will rarely be found among those owned by the government. And the impression grows stronger each year, that such horses are not readily found in the United States. The few that are raised find a ready market among civilians who enjoy riding a good horse and have the means for indulging in that pleasure. And until the supply is perceptibly increased, the army may get all possible satisfaction out of occasionally watching a real saddle animal ridden by its owner.

By saddle animal I do not mean what is known as a gaited saddle horse; although I do believe that if our cavalry horses were bred from fox-trotters, and our officers and men taught how to ride them, we could break all records for distance traveled in the field and for condition of both man and horse during and at the end of a campaign. The fox-trot does not in any way interfere with the regular walk, trot and gallop. It is merely a gait between the fast walk and the pounding trot, at which the horse can continue for almost as many hours as he can at a walk, and cover about one-third more distance. It is easy for the horse and for the man, and at the end of the day the horse will be comparatively fresh and the rider will not have had every bone in his body pounded until it is sore. He will be fit for something if occasion demands it in the way of guard or night work of any kind. Do not confuse the fox trot with the dog-trot, for they are as distinct as the trot and gallop. The

fox-trot is peculiar to the United States, and a cavalry command mounted on fox-trotters could make its marches of thirty and thirty-five miles every day with less grief to horse and man than we can at present make twenty and twenty-five miles. Any saddle-horse man will confirm this statement. Such an ability would be a supreme advantage to an army. To secure it, however, would take several years' attention—probably ten or fifteen, and the experiment will not readily be made in this country.

There are two phases to the remount question. The only one ever attempted in the United States, so far as I know, dealt simply with such horses as were picked up by whatever system of buying was at the time in practice. In former years, beginning while the Civil War was in progress, the horses were bought by cavalry boards. In recent years they have been bought under the contract system, and a more faulty method could not well be devised—faulty, that is, for the army; but ideal for the contractor. These new horses were shipped to some selected locality and turned loose in immense corrals, to which also were sent sick and broken-down horses from the regiments. We saw some similar corrals during the Spanish War, and the chance for improvement for either the new horse or the broken-down one was as near nil as anything on this earth can well be. Beyond a slim chance at getting a portion of his forage and an occasional drink of water, he gave evidence of the acme of neglect. I once served under an officer who had been in charge of one or more of these corrals during the Civil War. I think they were at City Point. From his description of the means at his disposal for caring for these horses, it is not surprising that thousands of them died; but it is surprising that any of them lived.

A remount system depending solely on depots for recuperation of sick and debilitated horses will never, I believe, render a return for the fence enclosing the grounds. During a fast and hard campaign it might be advisable, if practicable, to ship worn-out horses to the rear to such a place, if a sufficient force of competent veterinarians and nurses were at hand to give intelligent care to every horse; but if the

depot corrals we have seen were samples of what are to follow, deliver us from such an empty effort. Under ordinary conditions full recuperation should be provided for in the post, either in each troop or at a central plant. In twenty-seven years' service I have seen only one place provided for the treatment of disabled horses, and that place is the makeshift at Fort Leavenworth. I understand that more complete provision is contemplated. Of course such a plant is needed, but its services will be required, to a great extent, by the horses of weak constitution and unsuitable conformation—classes from which we get so many now, but from which we need get none if more good horses were bred and a different method could be followed in buying. Just as the weak men require almost constant attention in our hospitals, so will these classes of horses monopolize the veterinary plant. No one can claim that there is a sufficient supply of horses suitable for our cavalry. Possibly they could be found if the country were raked from all directions, the contractor eliminated, and the purchase money could go direct to the owner of the horse. But as long as the contractor must make a profit of from forty to fifty dollars on each animal, we need not look for much real improvement, no matter how many remount corrals may be established.

To secure results we must do something to increase the number of suitable horses produced, and after having those that are bought properly trained and gaited for saddle purposes, require from both officers and men sufficient knowledge of how to care for them as to preserve their serviceable qualities as long as possible.

To my mind a remount system should deal only with the question of furnishing and training the new horses that are required from time to time. The first thing to do in this line would be to adopt some system under which the farmer would realize that his pecuniary interests would be advanced by becoming a party to the system. This, I think, could easily be accomplished with a reasonable outlay by the government. Five suitable stallions could be bought for not to exceed \$500 each. One hundred suitable mares would cost not more than \$250 each. These animals would represent

an expenditure of \$27,500. The product each year would be about one hundred colts, one-half of which would be horses, and the other half mares. At the end of four years there would be about fifty stallions old enough to be used for breeding purposes. An arrangement could certainly be made with the government of each State to take one of these stallions and locate him in a section in which the breeding of horses was something of an industry. The stallion would become the property of the State, the only conditions imposed being that he should not be castrated, and that the cost of service should not exceed that of the average stallion in that section—barring track horses of all kinds. This would bring him within the reach of the poorest man owning a mare. Each year thereafter an additional three-year-old stallion would be furnished each State on the same conditions.

In a comparatively few years every State would have a number of high-class stallions from which suitable horses for cavalry and artillery purposes could reasonably be expected; and horses of this class are more generally useful in civil life than any others. To prevent in-breeding, each of these stallions should be changed to a different section of the State every four years, and should not repeat his tour in any one section. In the meantime there would be coming on each year about fifty mare colts. A few of the best could be retained at the home plant to replace any of the older ones that proved to be not good producers. The rest could be sold in the market; or better still, to farmers at a moderate price, on the condition that they be bred each year, as far as possible, to stallions whose origin was from the home plant and of different stock. This particular feature could not easily be continued very many years; but before it would become too complicated, the breeders themselves would protect their increase from the ill effects of in-breeding.

The greatest judgment and care would have to be exercised in buying the stallions and mares with which to make the original start, or failure would be inevitable. Frequently the stallion or mare, about which no adverse criticism can be offered as an individual, proves to be weak as a producer;

and for this reason, no animal of either sex should be bought until a sufficient number of matured colts were examined and tested to indicate beyond reasonable doubt that future progeny would possess the qualities which have been proved to be most desirable. Such indication cannot be determined from the appearance, conformation or qualities of the sire or dam, but must be obtained from testing their get after maturity. The selection of these animals would therefore not be a duty very quickly performed, for it would be no small task to find, say twenty matured horses from a certain sire, and examine and test them to such an extent as their owners would permit. Of course the pedigree of each animal bought must be carefully verified and recorded, so that cross-breeding might be followed in the public stable. No one strain should predominate in any two of the stallions, and as many good strains as possible should be found among the mares.

Connected with the home plant, and in time with each State plant, could well be started the real remount depot, the officer in charge being authorized to buy any horse presented that filled all requirements for the cavalry or artillery. He would know the number required at all times, and until that number was on hand he should not be handicapped in any way. His judgment alone, with that of a veterinarian, if he needed one, should govern, and the tests to which his judgment would soon be put should determine when his detail should cease.

The owner would get the full value of his horse; and the benefits of the system would be distributed among all owners who might have occasion to sell one or more horses. Under our present system the profits do not go to the producer, but to the keen buyer who naturally takes advantage of every influence which tends to force the owner to part with a portion of his most valuable assets. If there is anyone who is entitled to the full value of his fruits, it is the farmer. He frequently is brought to the brink of disaster through sickness, loss of crops, fire, etc.; and under just such conditions he is forced to sell some of his horses. The buyer is always ready to take the horse, but he never fails to

get every cent he can out of the unfortunate circumstances surrounding the seller. If there were such a place as the remount depot outlined above, where the man could go with his horse, and where he would get its full value, the additional money so placed would surely be of greater benefit than if it had accrued to the intermediate man.

The officer in charge of the remount system should also be authorized to hire a suitable number of expert riders to train the horses so collected, instead of turning them loose in a corral to hustle for themselves until they are shipped to a command. Such riders can be secured among growing boys and young men who fully understand the practical work. Kentucky and western Missouri are full of such material. The horses should be ridden every day and trained to obey all the aids without excitement or resistance; and also accustomed to equipment of the arm for which they are intended, so that when received by troops they would be acquainted with every sight and sound by which they were to be surrounded. As soon as proper provision can be made after the first year, the officer in charge should be authorized to buy colts that have reached an age at which their qualities are shown; and their training should be begun at once and continued until they are ready to be sent to a command.

With any sort of care and attention the most thoroughly trained and obedient horses would as a rule come from this supply. The colt is easily controlled and if taught obedience from almost the beginning of his life, he never thinks of resisting.

Nearly every foreign country imports horses for the public service every year. At present the United States gets a comparatively small portion of this trade during times of peace. We could have nearly all of it, and it would amount to no small figure. Year by year the countries of Europe, excepting Russia, are more restricted in grazing lands, and necessarily have to look to those countries with extensive lands of this kind for a supply of the animals for whose proper increase wide ranges of pasture are required. South America is being drawn upon to a considerable extent; and even wild, unbroken horses are imported to supply the de-

mand. During the progress of a war this demand is largely increased, and we should have almost a monopoly of the trade. I have seen it stated that during the Boer War England bought about 125,000 horses in this country. Assuming fifty dollars as an average price paid, and it was probably greater, it is seen that more than six million dollars were distributed among the raisers of horses in this country. This is no indifferent amount of cash to receive in return for the comparatively small outlay required. To secure so many horses England had to take almost anything that was presented, with the result that the commands in South Africa were not well pleased with their mounts. There were several side-issues, connected with this large sale, that increased the amount of money brought to this country. It required the employment of a large number of men, the purchase of forage by the train-load, and the transportation lines of the West and Middle West reaped a rich harvest. It is extremely doubtful if a repetition of those conditions would result in so much money being again expended in the United States. Instead, it would probably go to South America and Australia.

We already control the mule market for the world; and there is no good reason why we should not do the same with horses.

A PROPOSED MODIFICATION OF THE PRESENT DETAIL SYSTEM.

BY LIEUTENANT CONSUELO A. SEOANE, THIRD CAVALRY.

EVER since the detail system for the staff departments became a law, we have with some sorrow noted the enthusiastic and consistent manner in which articles by various writers have appeared, particularly in the lay press, condemning the system for the Ordnance Department. We are called upon to notice repeatedly the number of existing vacancies and the improbability of ever filling them. Articles are brought out claiming that the Secretary of War has been won over into admitting that some other system will have to be devised for this department; again we are asked to believe that the Chief of Staff is to recommend against the system. Accepting the above as a statement of the facts, let us inquire and examine into the foundation of this state of affairs. Why does the present number of vacancies exist in the Ordnance Department? Enemies of the detail system say that officers of the line will not prepare themselves for such a technical branch, when, after a course of four years, they shall have to return to the line; and, as a consequence to such a condition, the supply of officers anxious for service in the Ordnance does not equal the demand. One cannot accept such an explanation without adding to it an exposition of the surrounding features and circumstances, and, accordingly, the reply to the interrogation above, would be somewhat as follows: Officers of the line do not prepare themselves for service in this branch because they recognize that it is next to impossible to pass the required examination for entrance; they see officers from West Point who were graduated sufficiently high from that institution to be assigned to the artillery, fail before an ordnance board; so,

instead of seeking admission, the other branches stand aghast and ask themselves, "What do they want?" There is an element of uncertainty and suspense lest the work of preparation may go for naught in almost every examination; and when such examination is surrounded by almost insurmountable conditions, few officers can voluntarily submit themselves to the ordeal.

To an investigating genius there is a vast field open for development from which we could receive much enlightenment; it has never been covered thoroughly. I refer to the psychological aspects of examinations. If a writer of strong idiomatic English, gifted with wit, common sense and the power of exposing the depths of human nature were to undertake this subject and analyze it as a Darwin, a Bacon or a Huxley would have done, we are sure that one of the conclusions he would arrive at would be, that the average person appears before a board of examiners with somewhat of the feeling that historians tell us the two young soldiers had who were summoned before the great Elector of Brandenburg, Frederick William of Hohenzollern. Strong suspicion attached the crime of murder to these young men, and as all other means had failed, in order to determine their guilt they were ordered amidst great ceremony and pomp to throw dice before the great Elector. This was called "an appeal to divine intervention," and the loser at the hazard was to be executed for murder. The first soldier threw two sixes, the highest score possible. On seeing this, the second soldier (Alfred was his name) fell on his knees and prayed to God for protection, saying he was guiltless. Then he threw the dice with such force that one broke in two pieces—one piece turning up an ace, the other a six; the whole die showed a six. This gave him a total of thirteen, and the assembly, filled with astonishment at the wonder, declared Alfred a free man.

Alfred's feeling before he threw the dice is the feeling of a person with an inclination to serve in the Ordnance to-day. He looks at the list of officers who have failed, and if that is not sufficient to deter him, he appears before the board hoping that some divine intervention may pull him through.

A man must be possessed of more than ordinary hope who will resign himself to a year or two of study with only an Alfred's chance of winning. There are few such men.

Again, those whose sympathies are against the detail system may show that the ordeal of examination has been surmounted by officers representing the three arms, and that the above deduction is not along the lines of correct and truthful investigation; but as logical conclusions can be drawn from false principles, and as error can be propagated by false premises, so champions of either side can go on to the end discussing the merits of the system of details.

Major Black, of the Corps of Engineers, believes that, as a means of proving the efficiency of an officer, an examination is a failure. I believe so too, and I purpose to suggest a different plan for selecting efficient officers for the staff corps.

The detail system must stand as it is enacted or go down all together, for if one department is to be permitted to set it aside, it will not be easy to draw the line where others shall stop. There was a time within the memory of young men when the Signal Corps was confronted with the great difficulty of demonstrating that it formed a part of the army, no less a person than the Secretary of War maintaining that the corps formed no part of the national defense. To-day, for entrance into that corps, they also would fix as a standard a prohibitive examination. Other departments will follow in line, until finally there will be no staff department whose threshold can be crossed by an officer of the line; and the detail system will be at an end.

Without further argument, here is the plan I would suggest: Let there be selected each year, or from time to time by any method except examination, such number of officers as may be required to fill the vacancies existing or to occur within a year in the Ordnance Department and let these officers be sent to one of the service schools for a course of instruction for one year. Let the school be the Artillery School or the Engineer School of Application or any other school deemed the most suitable; and if the present course at the selected school be regarded as insufficient for the prep-

aration of an officer for detail to the Ordnance, let there be such addition made to the course as may satisfy this department; but let the course be not longer than a year, and upon graduation let the officer be detailed for a tour of four years with this department.

If this system of *quid pro quo* be substituted for the fruitless examination system of to-day, we shall have accomplished the elimination of the false quantity from the equation; we shall have set aright a system correct in inception, deflected in execution. Under such a system there would be no dearth of officers applying for service with this department, and no further reason for affirming that the detail system is a failure.

THE USE OF THE BICYCLE IN THE ARMY.

BY LIEUTENANT FREEBORN P. HOLCOMB, FOURTEENTH CAVALRY.

THIS subject has been discussed a great deal during late years, but it seems to have been handled by men who have had very little experience in bicycling, and less in the army. One writer will say that the wheel is absolutely worthless for hard service over a rough country; and another, that it can be used to advantage under any conditions. The opinions differ so much, that it is hard to draw any conclusions, pro or con. I will endeavor to show, by actual experience, that the bicycle can be used in a rough country, over almost impassable roads and under the most unfavorable circumstances, and still be more useful in mapping, messenger service and reconnaissance than the horse.

In September, 1896, while serving as a private in Troop B, Eighth U. S. Cavalry, I was detailed with seven other enlisted men, on a reconnaissance and mapping expedition (using bicycles) with Captain De Rosey C. Cabell, First Cavalry (then first lieutenant Eighth Cavalry). The regiment was to go on a practice march from its station, Fort Meade, S. D., to Morecroft, Wyoming, and the scheme was for the bicycle detachment to precede it one day, make a map of the country, lay out the camps, and arrange for fuel and forage for the troops. As I now remember, the orders were to send a messenger back to regimental headquarters each day with a copy of our map, showing the location of their next camp, and a message about the fuel and forage. Our tentage and rations were carried in a light escort-wagon drawn by four horses. Each man was equipped with one blanket, canteen, cartridge belt, pistol, and carried cooked rations for one day in a haversack. The regulation blue uniform was worn.

The bicycle detachment left Fort Meade one day ahead of the regiment. The first day we traveled and mapped thirty miles, camping three miles beyond Spearfish, S. D. The roads were in good condition, and we made the thirty miles in about four hours. The next morning two members of the detachment were sent back to meet the regiment and deliver the map and message. At the same time the remainder of the detachment went on. That day we made thirty-one miles and camped at Sundance, Wyoming. The two messengers joined us that evening, having ridden seventy-one miles, the roads being in good condition. That night it rained and our troubles began, as a wheel is not of much use on a muddy gumbo road. The next morning another man and myself were detailed to take the message back to regimental headquarters. We had twenty miles to ride over the worst possible roads. It was still raining when we started. Our road was mostly uphill, and the wind was blowing a gale in our faces. Could the conditions have been worse? In some places it was impossible to push our wheels in the road, and we rode the greater part of the way on the side-hills. We arrived at Beulah, Wyoming, where the regiment was to camp, in four hours, the distance being twenty miles. Upon arriving at Beulah, we found that the regiment was not there, and, as our orders were to deliver our message at that place, we waited. The regiment did not arrive until late the next day, having been delayed by the rain.

After delivering our message, we started back to join our detachment. The rain in the meantime had stopped, and the roads were fairly good. When about half-way back my companion's wheel broke down and I had to go on alone. Upon arriving at Sundance, where I had left the detachment, I found that they had left early that morning, and there was nothing else for me to do but to go ahead. Shortly after leaving Sundance, I met two of our men riding back with the daily message, and they told me that the detachment had camped about twenty-five miles further on. The road was very good, and I joined them that night, having ridden forty-five miles that day.

The next day we rode into Morecroft, thirteen miles, to await the arrival of the regiment. My cyclometer had registered 139 miles since leaving Ft. Meade, four days before. The regiment arrived four days later and went into camp. After remaining in camp one day, the First Squadron was ordered to march to Devil's Tower, sixty-eight miles from Morecroft, and we were ordered to proceed with them to make the map. This entire trip was over the mountains. The roads were so bad that we left them altogether, and took the bridle-paths. We made the trip and return in three days, mapping the roads or rather the paths, as we went. The squadron took one day longer. The morning after the return of the squadron, the regiment left for home. We were not required to send back messengers on the return trip, and could travel as fast as we pleased. The detachment left as the regiment was forming, and went into camp about noon, at Sundance, a distance of thirty-eight miles. Leaving the latter place the next morning, we arrived at Fort Meade about 5 o'clock that evening, having ridden sixty-eight miles that day. The regiment arrived five days later. The detachment had ridden 396 miles, had been absent ten days and had done all the work required of it under the most unfavorable circumstances. All the distances mentioned above were accurately measured with cyclometers.

This trip certainly shows some of the possibilities of the bicycle. Under favorable circumstances, the average man, with a little training, can travel from thirty to fifty miles a day, seven days in the week, and map the country as he goes. At the end of his journey, he will have traveled farther, have his distances more accurate, and be in better physical condition than a man who attempts the same, or a much less task, on a horse. Especially in the presence of an enemy, the wheel would be useful in making a reconnaissance, as it runs almost noiselessly. Should the wheelman come upon a patrol or detachment of the enemy, he can hide himself more readily than if he had a horse. I do not by any means advocate the mounting of cavalry on bicycles,

but I do say that the wheel is superior to the horse for some kinds of work, under favorable conditions.

With roads such as we have in this country, a bicycle corps, for reconnaissance, map-making, and messenger service, would be a great addition to our army. When the roads are such that the wheelmen cannot operate, the wheels can be put in wagons, and the men mounted on the extra horses, as the wheels will more than pay for the trouble, by one or two days' work in a week. The great advantage of mapping with a bicycle is, that the distances are accurate,—much more so than timing a horse on the road. Should the horse shy or jump at any object, distance is either lost or gained; but the wheel goes right ahead, and its cyclometer registers the distance to a foot. Every cavalryman knows how hard it is to get a horse to trot alone, at a gait of eight miles an hour. To map with any degree of accuracy, with a horse, it must be done at a walk. Then the mapper can only travel four miles an hour, if he is lucky enough to have a horse which will travel at that rate. This is another disadvantage, while with the wheel he can go twenty miles an hour as well as two, and then have his map more accurate.

The popular idea of a wheel for hard rough service, is that it must be a heavy one. On the trip which I have cited in this paper, I used a twenty-pound "Outing" machine, with light racing tires, and never had a breakdown of any kind. However, I would not recommend such a machine for general service, substituting a twenty-five or thirty-pound wheel with heavy cactus-proof tires. In all experiments with bicycles, one of the greatest drawbacks has been the chain's getting out of order, and clogging with mud and sand. This difficulty has been entirely overcome, however, by the adoption of the chainless machine.

In connection with the use of the bicycle in actual service, Captain Carl Reichmann, Seventeenth United States Infantry, military attaché with the Boer army in the field, says: "In the transmission of intelligence, the bicycle played a prominent part. The cyclists did not confine themselves to the roads on which they had the right of way; they made short cuts by following cattle paths, and even rode across

the prairie. During the operations in the Free States in March and April, the number of cyclist dispatch riders was considerable, and they were numerous in the operations east of Pretoria. They could be found at every general's headquarters, and General Botha usually had two or three cyclists at his disposal, in addition to several mounted orderlies. The cyclists did not encumber themselves or their wheels with any special equipment, were dressed like ordinary cyclists (knee breeches and long stockings), and sometimes carried a revolver."

Captain S. L'H. Slocum, Eighth United States Cavalry, who was military attaché with the British army at the time says: "Only a few bicycles were used by the army. They are one of the available and perfected means of rapidly and cheaply transporting the soldier, and bicycles should, I think, therefore form an integral factor in every army. In a country where the roads are generally excellent, as in England and on the Continent, I see no possible reason why a large bicycle corps should not always be well to the front, and in conjunction with a large body of cavalry, render most valuable service."

The following are extracts from the reports of the military attachés to the different European countries, in connection with this subject:

Germany: "It is also significant that the Germans have for the last two years, made good use of cyclists. Those of each army were organized into a company of three officers and one hundred and fifty men, taken from different organizations."

Italy: "On account of the good results obtained at the maneuvers, three new bicycle companies, each having a captain and four lieutenants, will be organized."

France: "Two new bicycle companies are to be organized in addition to the two existing ones. They are to be one hundred and fifty men each."

Russia: "On January 19, 1900, an order was issued fixing the distribution of bicycles. Fortresses of the first, second and third classes, infantry battalions, infantry regiments, artillery companies and detachments of telegra-

phists, are all given bicycles. The type of the bicycle is left to the discretion of the local higher military authorities, the rigid type, however, being retained, as the folding bicycle has proven unsatisfactory."

Switzerland: "Bicycles were much used by patrols and scouts, and for messenger service in the place of cavalry, which is expensive to maintain in Switzerland. The roads are generally good, and favorable for cyclists. In the route marches, a cyclist marches with the captain, and two or more with the regimental or battalion commanders."

If all European countries can experiment so extensively with bicycles, why cannot the United States? Certainly what we have heard of the excellent services rendered in South Africa by bicyclists, both on the British and the Boer sides, is in favor of the adoption of a bicycle corps in our own army.

One of the greatest drawbacks in the experiments with military cycling, has been the question of equipment. In most cases, the soldier has been required to carry almost the same equipment as a cavalryman. This, of course, impedes his progress. It is unreasonable to expect the cyclist to perform the duties of a cavalryman. He should have his own distinct duties, and should be properly equipped to perform them. In time of war, the cyclist should carry only a large caliber pistol, mapping outfit, and should "rustle" for his rations and a place to sleep. In this way, efficient service can be obtained, but the loading down of the cyclist, and the making almost a pack-mule of him, will never be a success. Every army should have a corps of men, skilled in map-making, and reconnaissance work, and trained in the use of the wheel, as the cavalryman is trained in the use of horses. Cut the equipment down to almost nothing. There is about as much use for a military cyclist to carry a rifle or carbine and a heavy ammunition belt, as there is for a sailor to wear spurs. He must be taught to rely only on a pistol and a clean pair of wheels, for his own safety. He must be taught to disable his machine in case of capture, so that it will be of no use to the enemy.

There should be a school at Fort Riley, Kansas, for a bi-

cycle corps. This corps should consist of a small number of men, picked for the purpose, and commanded by an officer, or officers, skilled in the use of the wheel and in map-making. These men should not be required to drill, but instead, they should have a thorough course of instruction in map-making and map-reading, reconnaissance, and the mechanism of a bicycle. Each man should be taught the simple repairs of tires, and other parts of his machine, which he might be required to make on the road. He should be able to take his wheel apart, and to adjust the bearings, etc., without damage to the threads. This would be useful in caring for the machine after a trip through mud and rain, as no bearings can be made mud-proof. All this instruction would be a matter of a short time, and after a thorough course, a number of men could be turned out who could map at the rate of thirty miles a day (on good roads), who understood the care of their machines, and who had learned to "rustle" for themselves in the field. This detachment should be attached to a troop (or troops) of cavalry, and not required to do any post duty. As soon as the course of instruction was completed, they should be sent to different posts, and be required to map the country in the vicinity of each. This would not only keep the men in practice for mapping, but also keep them in condition for long rides. They should all be sent to the place of the summer maneuvers, and be required to put their work into practical use. After one or two trials at the maneuvers, they would show what they could do, and their work would be excellent, provided they had received the proper course of instruction.

As to the make and style of the machine, equipment and uniform, I will leave it to some one else to suggest. However, I will say, the simpler the better. If this scheme should ever be adopted in our army, it will be found to be an inexpensive experiment.

SUGGESTIONS TO YOUNG OFFICERS.

[EXTRACTS FROM REMARKS MADE BY GENERAL BELL TO STUDENT OFFICERS OF THE GENERAL SERVICE AND STAFF COLLEGE AT THE OPENING EXERCISES ON SEPTEMBER 14, 1903.]

TO those who have been careful observers of the recent trend of progress in our army, there need hardly be pointed out the value of the opportunity which is now afforded you gentlemen. It is my conviction that few incidents connected with an officer's career can lead to greater credit upon his record than graduation with distinction at this service school. It becomes a stepping stone to service at the War College, or on the General Staff, besides leading to possible selection for important duties which may afford opportunity for achieving additional distinction.

A stage in the existence of our army has now arrived when no officer need expect to achieve any considerable distinction without acquiring the reputation of being a zealous practical student of his profession, and industrious and conscientious in devotion to his duty.

The course of instruction you are about to enter upon consists of two kinds—namely, study of theory, with recitations, and outdoor practice in the field. The former is sedentary; the latter involves some physical exertion. They sometimes come at different seasons of the year, and sometimes together. When engaged in the former kind only, it is essential that you take necessary exercise. If you neglect to do so it will not be long before your physical condition will be such that you cannot study properly. You may have sufficient will-power to force yourself to go over your lessons, but you will find it impossible to concentrate your attention or fix the subject-matter of lessons on the mind.

A most important part of an officer's self-education is the cultivation of habits of accurate observation, of careful discrimination in the reading of instructions and orders, and of thoroughness and accuracy in the execution of them. The art of accuracy and thoroughness depends much upon accuracy of thought and diction. One cannot talk or write clearly or definitely without thinking clearly and definitely. Ability to do this can be cultivated only by constant practice. Nothing assists so much in acquiring these qualities as a habit of giving careful study and consideration to the transaction of ordinary routine administrative work. The instructors in this institution are therefore required to make every endeavor to inculcate habits of careful observation and accurate thinking, to the end that student officers may acquire and foster habits of accuracy in the interpretation of orders and in complete and thorough compliance with same.

Officers must expect to be judged by such habits of precision as they exhibit in understanding and complying with directions and orders received during the course of their instruction and every-day duty.

* * * * *

Nothing is so calculated to create a favorable impression of an officer's worth, reliability and usefulness as the amount of pains, thoroughness and system observable in his manner of performing his simple every-day work. These qualities are particularly liable to be taken cognizance of by superior officers when considering or examining reports, indorsements, accounts, proceedings of boards, records of courts-martial, correspondence, essays, etc., etc. An officer who submits a carelessly written, incomplete document, or an indorsement which clearly shows he has taken no interest in, and made no careful study or investigation of the subject dealt with, is sure to create a more or less unfavorable impression upon those who read it. On the contrary, one who has the habit of making clear, brief, pointed statements of all the facts necessary to a complete understanding of the subject he treats, who leaves nothing uncovered in his presentations, who evidently gives careful study and considera-

tion to clearness and brevity of statement, is bound to create a favorable impression of his ability and zeal.

* * * * *

Nothing is more indicative of habits of precision and care than papers which an officer has produced, in which efforts at neatness are evident. In this regard no half-way measures should be employed. A slovenly indorsement, written on paper with ragged edges, pasted on askew, with the lines of writing running in every direction, is indicative of slovenly habits. In preparing indorsements, scissors should always be used to cut the paper, and a ragged or protruding edge should never be allowed to go forward.

* * * * *

In official correspondence, a wise and experienced officer presents all matters in a direct, straightforward, unequivocal, dignified manner. He never deals in subterfuge or sophistry, avoids animadversions upon personal characteristics or motives, eschews sarcasm and ridicule, and shuns the appearance of trying to be keen or smart. He does not try to instruct his superiors in the logic of the circumstances and conditions set forth, or seek to influence their judgment by specious arguments. He recognizes that if a plain, candid, forceful, dignified, dispassionate statement of facts, leaving to his superiors the privilege of drawing self-evident conclusions, is not sufficient to justify his conduct, or establish the correctness of his views, he has a weak case, in which no arguments on his part are going to win with capable superiors. He does not enter into tedious explanations or excuses for sins of omission or commission. If he feels that some explanation is absolutely essential to his own satisfaction, he makes it in as few words as possible.

He realizes that none of us are infallible; that we are all liable to err, and believes that, generally speaking, when one discovers or feels he has not been prompt, has forgotten or failed to attend to a duty, has made a mistake, or has acted inadvisedly or hastily, it is better briefly to acknowledge error by an expression of regret. This course leaves a better impression of an officer's mental caliber and attitude. Nothing conveys so unfavorable an impression of a

person's mentality or disposition as vain and persistent efforts to support an illogical or untenable position by specious arguments or excuses.

* * * * *

A liberal-minded, sensible officer has a habit of attributing to others motives and intentions as praiseworthy as his own. As it takes two to initiate a controversy, he resolves not to be one of them. If a comrade, inspired by illogical resentment, makes the mistake of reflecting upon his motives or conduct, he does not foolishly reply in kind or enter into lengthy and acrimonious rebuttals, but replies with a dispassionate, dignified statement of facts, leaving to these facts his justification, and trusting his superiors to form correct conclusions. Such a course is bound to give him the advantage and create or promote a favorable impression of his character.

Difference of opinion is as natural as difference in the disposition, character, judgment, intellect and ability of members of the human family. There is therefore no occasion for a feeling of irritation, displeasure or discomfort in encountering difference of opinion. There may be ample occasion for regret, but this regret should not be permitted to degenerate into animosity or antagonism.

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So much depends upon the neat and correct appearance of officers, that too much attention cannot be given to neatness of attire.

* * * * *

A good officer is patient, just, and reliable, ambitious to acquire knowledge, conscientious in the performance of duty, possesses a high sense of honor, pride in the service, and confidence in his ability to perform the tasks assigned him. A young officer must acquire a reputation for worth before he can afford to run risks with his military fortune, and even the oldest and most distinguished officers cannot persistently indulge in vices without becoming bankrupt in reputation, in spite of former triumphs and successes.

Excessive drinking and gambling are habits that every officer should avoid. If avoided in youth, they will never

be acquired with age. Both these practices will be prohibited at this school and college, and no officer need expect to indulge to excess in either without receiving correction. Even a moderate indulgence in gambling and drinking will keep one's finances always in a state of pressure. We should endeavor, no matter what our habits, at least to measure our expenses by our pay.

* * * * *

We desire to say a word as to financial ethics. The standard of the army is high, and it is to the interest of every officer to keep it so. Credit is freely extended to officers, on account of connection with the military service, which might be refused the same individual if not so connected. Such credit is an honor to the service and a valuable asset to every officer. It cannot long continue if persistently abused by some officers. Owing to exigencies of the service and unexpected calls for expenditures, which are liable to arise in the careers of all officers, it is, unfortunately, not always possible to avoid debt. But an officer who is conscientious and scrupulous in the discharge of financial obligations can always borrow sufficient money to meet his debts when due, unless he spends his time and salary in extravagant and riotous living.

* * * * *

The custom which is quite universal at this post, of officers saluting each other as they pass, has been observed with much pleasure. It may seem queer that a thing which has always been required by the spirit of orders and regulations should be mentioned as an agreeable custom, but during a very considerable length of service I have never seen this custom so universally observed as it is in this post at the present time. I belonged to the army nearly twenty years before I ever saw two officers salute each other, except when they were not on speaking terms.

The habit of saluting is military, and when officers practice it very generally among themselves soldiers will cease to consider it demeaning, and practice it more cheerfully.

* * * * *

In conclusion, it is desired to invite your attention to a

very practical question. The records of post headquarters from September 1, 1902, to September 1, 1903, have been gone over, and, though the search has not been entirely thorough, it is found that something like 300 communications were returned from higher authority, for correction or further information, and about 360 were returned from post headquarters to officers of the garrison, for similar reasons. Nearly twelve per cent. of all communications passing through the office had to be handled several additional times because officers had not been sufficiently careful or efficient in preparing them in the first place. It was found that nearly one-third of all boards of survey needed correction of some kind. It is not difficult for any one to understand the amount of additional labor and annoyance that was involved in securing corrected information in these cases. Nor is it difficult to imagine how much time and trouble would have been saved had all been careful and accurate in complying with orders in the first place.

It is considered advisable to impress upon all the importance of care and accuracy in paper work, and an effort will be made to do so. Though it is not well to be exacting with officers whose unsatisfactory preparation of papers may reasonably be assigned to excusable ignorance, evident carelessness and indifference should not be tolerated. Perhaps the most fruitful cause of inefficiency in administrative work is the indifference of officers, and their failure to read orders with sufficient care fully to understand and digest their requirements.

THE FOURTH CAVALRY WITH GENERAL LAWTON* IN LUZON.

BY CAPTAIN GEORGE H. CAMERON, FOURTH CAVALRY.

AT the outbreak of the war with Spain, April 21, 1898, the officers of the Fourth Cavalry and the stations of its troops were as follows:

OFFICERS.

Colonel, Charles E. Compton.

Lieutenant-Colonel, Louis T. Morris.

Majors, Sanford C. Kellogg, Louis H. Rucker, Jacob A. Augur.

Adjutant, First Lieutenant Cecil Stewart.

Quartermaster, First Lieutenant Geo. H. Cameron.

Troop A—Captain, Alexander Rodgers; first lieutenant, Floyd Harris; second lieutenant, James N. Munro.

Troop B—Captain, James Parker; first lieutenant, vacancy; second lieutenant, William R. Smedberg, jr.

Troop C—Captain, George H. G. Gale; first lieutenant, John M. Neal; second lieutenant, Thos. G. Carson.

Troop D—Captain, Joseph M. Dorst; first lieutenant, George O. Cress; second lieutenant, Hamilton S. Hawkins, jr.

Troop E—Captain, Hugh J. McGrath; first lieutenant, Charles P. Elliott; second lieutenant, LeRoy Eltinge.

Troop F—Captain, Charles A. P. Hatfield; first lieutenant, Robert D. Walsh; second lieutenant, Lucius R. Holbrook.

*Henry Ware Lawton: Transferred as first lieutenant from Twenty-fourth Infantry to Fourth Cavalry January 1, 1871; regimental quartermaster May 1, 1872, to March 20, 1875, and September 1, 1876, to March 20, 1879; captain March 20, 1879, to October 2, 1888; major inspector-general October 2, 1888.

Troop G—Captain, Fred Wheeler; first lieutenant, Robert A. Brown; second lieutenant, James S. Parker.

Troop H—Captain, James B. Erwin; first lieutenant, Thomas H. Slavens; second lieutenant, Frederick T. Arnold.

Troop I—Captain, James Lockett; first lieutenant, James E. Nolan; second lieutenant, Charles T. Boyd.

Troop K—Captain, Harry C. Benson; first lieutenant, Louis C. Scherer; second lieutenant, Samuel McP. Rutherford.

Troop L—Captain, Cunliffe H. Murray; first lieutenant, Samuel G. Jones, jr.; second lieutenant, Edward B. Cassatt.

Troop M—Captain, Wilbur E. Wilder; first lieutenant, John A. Lockwood; second lieutenant, Elmer Lindsley.

Veterinarian, Alexander Plummer.

Stations.—Headquarters, band and Troops A and G, Fort Walla Walla, Wash.; Troops B, C, I and K, Presidio, San Francisco, Cal.; Troops D and H, Fort Yellowstone, Wyo.; Troop E, Vancouver Barracks, Wash.; Troop F, Boise Barracks, Idaho.

The colonel was in active command of the regiment; the lieutenant-colonel, of the squadron at the Presidio, and the second major, of the two troops at headquarters.

The senior major was military attaché to the Minister to France, and the junior was on duty as assistant commandant at the School of Application at Fort Leavenworth, Kansas.

Of the captains and lieutenants, without specifying their different duties, it will be sufficient to state that seventeen were away from the regiment, leaving but twenty for duty with troops.

The outlook of the regiment for active service was most discouraging. Stationed the farthest west of the cavalry regiments, only the unexpected in Cuba would give it a chance at the front. As a natural consequence, those of the officers who were on the spot, secured appointments in the line and staff of the rapidly organizing State Volunteers.

Captains Dorst and Parker, Lieutenants Slavens, Cassatt, Scherer and Smedberg were attached to the volunteers in

May, Captain Wilder and Lieutenant Brown in June, Captain McGrath and Lieutenant Benson in July, and Captain Rodgers in December. Colonel Compton was appointed brigadier-general of volunteers and assigned to the command of the First Brigade, Second Division, Third Army Corps. On May 12th he left for Chickamauga Park, Ga., taking with him as aide the regimental adjutant, Lieutenant Stewart.

In the meantime, under the provisions of G. O. 27, A. G. O., of April 27th, the enlisted strength of troops was increased to one hundred men, and the two skeletonized troops, L and M, were reorganized. To effect this latter step, five experienced men were ordered transferred from each troop. These fifty men were selected by troop commanders with such care and regimental esprit that L and M returned to harness with as efficient a set of noncommissioned officers as could be desired. By the 7th of June, all troops except the two at Yellowstone Park were recruited to full strength. The recruits were mostly from the East, mere boys, adventurous spirits enlisted for the war. They had been obtained under hurry orders, fell far below the average in brains and physique, and chafed under the usual "licking into shape."

Admiral Dewey's victory in Manila Bay and his call for troops to hold the islands changed the whole situation, for, by the shifting of the scene of action, the regiment, from the last, suddenly became the first available, and grumbling gave way to rejoicing.

Concentration of forces, both regular and volunteer, promptly began. Organizations, on arrival in San Francisco, were reported to Major-General Wesley Merritt, U. S. Army, who, as fast as he could obtain transports, dispatched these "expeditionary forces" to Manila, sailing himself with the third expedition, and being succeeded in charge of the concentration by Major-General E. S. Otis, U. S. Volunteers.

The field, staff and band arrived from Walla Walla on June 6th, Troop G from the same station the following day, and Troop E from Vancouver Barracks June 19th, reporting at once at the Presidio.

On June 14th, Troops C, I, K and L were relieved from post duty at the Presidio, were assigned to the First Brig-

ade, Division of the Pacific and Eighth Army Corps, and went into camp to prepare for departure.

Several changes in the officers had now taken place. The regimental quartermaster, Lieutenant Cameron, upon arrival from Walla Walla, was appointed adjutant, and was succeeded as quartermaster by Lieutenant Nolan. Major Kellogg joined and was placed in command of the six troops. Captain Murray and Lieutenant Elliott reported for duty. The latter had been on leave of absence awaiting retirement for disability, but, with customary gameness, succeeded in obtaining permission to join. First Lieutenant E. B. Winans, Jr. (promoted to the regiment and on duty with State troops), was assigned to the vacancy in Troop B and later exchanged to C with Lieutenant Neall. Lieutenant Jones transferred to the Fifth Cavalry with First Lieutenant W. E. Almy, who never joined. Lieutenant Lindsley was promoted out of the regiment and was succeeded by Second Lieutenant Malin Craig. On July 1st Lieutenant Cameron resigned the adjutancy and was succeeded by Lieutenant F. W. Harris.

The problem of mounts for the cavalry was most perplexing. Sea transportation was scarce for even the men, while many believed that the long trip to Manila could not be made by animals. General Anderson had cabled from Hong Kong that Chinese ponies would prove satisfactory, but, needless to say, cavalry officers were loth to be separated from their American horses. Finally, General Otis determined upon an experiment, and ordered the fitting up of a sailing ship, the *Tacoma*, as a horse and mule transport. Lieutenant Cameron and Veterinarian Plummer were placed in charge of the vessel, and to them were turned over ninety horses selected from the youngest and toughest animals of the squadron.

The remaining horses were reluctantly surrendered to the post quartermaster. On the 14th of July the six troops of "foot dragoons" broke camp and marched to the city, embarking on the transport *Peru*, formerly a liner of the Pacific Mail Steamship Company.

The personnel of the sailing squadron follows:

Major Sanford C. Kellogg, commanding ; Major Louis H. Rucker, duty ; Second Lieutenant Charles T. Boyd, adjutant ; Second Lieutenant LeRoy Eltinge, quartermaster. Troop C, Captain G. H. G. Gale ; Troop E, First Lieutenant Charles P. Elliott ; Troop G, Captain Fred Wheeler, Second Lieutenant J. S. Parker ; Troop I, Captain James Lockett ; Troop K, Second Lieutenant Thos. G. Carson ; Troop L, Captain C. H. Murray.

General Otis, with his staff and the two light batteries of the Sixth U. S. Artillery, were also on the *Peru*, while on the *City of Puebla*, which kept company on the voyage, were the headquarters and five companies of the Fourteenth U. S. Infantry. The two ships sailed July 15th, reaching Honolulu July 23d. Here it was learned that there was no protection for American interests. The islands had just been declared territory of the United States, and, as an uprising of the native element might occur, it was decided to await the arrival of the U. S. Cruiser *Philadelphia*, then on the way from San Francisco for the flag raising.

Eleven days elapsed before the voyage was resumed. During the voyage, Captain Murray was appointed Military Secretary to General Otis, Lieutenant Parker falling heir to the command of L Troop. When Manila Bay was reached, on August 21st, and the news was brought aboard that the city had surrendered to our troops eight days before, the chagrin can be readily imagined. On August 22d the six troops were disembarked at Cavite and quartered in the Spanish Marine Barracks just outside of the Arsenal.

About the first report of the situation was to the effect that the Filipino forces that had assisted in the capture of Manila were concentrated around the city, General Merritt having refused permission for them to enter the Walled City after its capitulation. There existed, in consequence, a growing mutual mistrust between the American and Filipino forces. This mistrust was promptly instilled into the officers and men of the squadron, and even fanned into actual enmity by an occurrence of the 24th.

Two privates of the Utah Light Battery, on pass in the town of Cavite, had filled up with the native *vino*. Their

money exhausted and having been refused more liquor, one man proceeded to give a touch of Western America by discharging his revolver through the roof of the "joint." The frightened proprietor rushed into the street and reported the affair to a Filipino lieutenant who was passing with a patrol of six men. Without further investigation the officer lined up his men, and, as the two Americans emerged into the street, ordered a volley. Both men dropped, one dead, the other mortally wounded. The alarm was given and the squadron turned out with a rush. Advancing by troop through parallel streets toward the Filipino headquarters, Troop C was soon fired upon and two men were wounded in the thigh—Privates Thomas E. Langdon and Fredrick Nachbar. In the narrow street, only the point could return the fire, but the four men as they rapidly advanced gave such an exhibition of marksmanship that a Filipino lieutenant soon appeared with a white flag, and was followed by one of Aguinaldo's aides. After a lengthened parley the troops were marched back to barracks and were soon followed by Aguinaldo himself. In reply to a demand for the lieutenant in command of the patrol, Aguinaldo pledged himself to have the offender shot at daybreak of the following day. Several volleys were indeed heard next morning, but from natives it was afterwards learned that there was no victim at the ceremony.

Smarting under this outrage, and restless from inactivity, the squadron was moved on September 9th to the suburb of Paco and quartered in the huge tobacco factory. Here began a five month's tour of duty that undoubtedly tested endurance and discipline more than any period of Philippine service. At first the sentinels of our outposts at the Paco Bridge and on the Singalon Road, walked side by side with Filipino sentinels. Two companies of native troops were quartered in the Bishop's palace and one on the Singalon Road inside of our lines. This absurd state of affairs lasted until October 25th, when, yielding to General Otis's persistent demands, Aguinaldo ordered his troops withdrawn. Outposts were then established at Blockhouses 12 and 13, and on the so-called Battery Hill. As these points

were remote from the barracks, connecting and interior patrols were necessary. In consequence, for over three months the men had consecutively twenty-four hours' outpost, followed by twenty-four hours' patrol, with only twenty-four hours off duty, the last consumed entirely in catching up on sleep. This severe work was aggravated by the conduct of the imbecile Filipino soldiers. Mistaking the determined American policy of conciliation for one of timidity, they jeered our sentinels and in the filthiest language conceivable dared the "coward" outpost to fight. Too much praise cannot be given to our seasoned noncommissioned officers for their successful restraint of impulsive recruits. The latter could not understand orders that required them to swallow insults for which they would fight at home. Although at this time the sick report was not large, the strain and the climate were exhausting the men to such an extent that they sickened rapidly when actual campaigning began.

From the time of arrival, it had been evident that Major Kellogg would be unable actively to command the squadron. He was therefore retired by cable order from Washington on September 23d, Major Rucker assuming command. Lieutenant Elliott's retirement for disability was published in War Department Orders of July 29th, while he was at sea, the notification reaching him two months later. The keen regret with which he relinquished active duty was shared by his devoted comrades.

On October 3d, Lieutenant Eltinge succeeded him in command of Troop E, and on November 11th, an exchange in the command of Troops E and G was ordered, Captain Wheeler returning to his old organization.

In the States, Lieutenant-Colonel Morris, who had been retired at the Presidio on July 22d, was succeeded in command of the regiment by Lieutenant-Colonel Henry Wagner. Major Kellogg's vacancy was filled by Major Charles Morton, assigned to the command of Fort Walla Walla.

On December 5th, the regimental quartermaster, First Lieutenant James E. Nolan, died of pneumonia at the Presidio. His loss was a severe blow to officers and men, for aside from his efficiency and his manly sterling traits,

"Nick" was undoubtedly the most popular man in the regiment. He was succeeded by Lieutenant Slavens. Except those cited above, there were no changes in the troops at home during the year.

Major-General Anderson, U. S. Volunteers, commanding the First Division, had displayed much interest in obtaining a mount for the cavalry. His efforts were continually met with the familiar cry of "expense," but he persisted until, on January 1, 1899, Troops I and K, each received seventy-seven native ponies. These little animals averaged twelve hands and weighed only about 700 pounds, but turned out to be wiry, plucky and easy-gaited. Under a long-legged trooper they certainly presented a droll sight. First Sergeant Balch, of L Troop, who stood six feet three inches, frequently stepped directly over them, and when a drowsy trooper dropped his brush on the other side in grooming, he simply leaned over the pony and picked it up. Saddle-bags actually buried them from view, and the haversack was substituted. Cinchas were shortened about six or eight inches.

Fortunately no bronco training was necessary, and inside of three days mounted squads were scurrying about performing the patrol work. This was a great relief to the men, particularly so, since the troops on the 1st and 2d of January had been moved into the Exposition buildings in Ermita, a full mile further away from their outposts.

On January 12th, Major Rucker divided the six troops into two squadrons; the First, E, I and K, commanded by Captain Wheeler and known as the mounted, and the Second C, G and L, commanded by Captain Gale and known as the dismounted squadron.

Captain Lockett was detailed January 16th on staff duty with the Second Division, and the last available subaltern, Lieutenant Boyd, succeeded to the command of Troop I. Six troops with only six officers!

The first trip of the *Tacoma* turned out disastrously. The condensing plant supplying drinking water was not equal to the demand, and broke down, necessitating a stop at Honolulu, contrary to the original plan. When the ship reached that point, on August 19th, the protocol of the treaty with

Spain was in force. General Merriam, in command of the U. S. forces, ordered the animals, forage and transportation unloaded, both to comply with the terms of the protocol as he interpreted it and to supply the needs of the 3,000 troops in camp at Waikiki. The ship was ordered back to San Francisco to await further instructions.

The feasibility of transporting animals had, nevertheless, been clearly demonstrated, as only four out of 210 died on the trip, the remainder stepping ashore in good condition. The *Tacoma* reached San Francisco October 3d. Lieutenant Cameron having been ordered to West Point for duty, First Lieutenant John O'Shea was placed in charge, with orders to refit, reload and sail again. Extensive repairs and alterations in machinery delayed the departure until December. She picked up at Honolulu the original cargo of animals and transportation. The voyage to Manila consumed sixty-eight days, but the stock was landed in excellent shape, the mules and transportation turned over to the chief quartermaster, and eighty-one of the original ninety horses, assigned on March 3d to Troop E. The first appearance of the army mule and "caballos grandes" in the streets of Manila produced a great sensation among the natives.

During the month of January the aggressiveness of the Filipinos increased steadily. They could be seen digging trenches and throwing up works, which practically placed our forces under siege. Their bravado and insults were now manifestly directed to provoke the first fire from the Americanos who were then to be "rushed into the Bay." In spite of all efforts to prevent it, their scheme succeeded on the night of February 4th, when one of our sentinels on the north line fired upon a Filipino in uniform who deliberately crossed the sentinel's post and refused to answer the challenge.

The shot brought a volley from the Filipino lines with a promptness that would have convinced the most skeptical. The volley was answered, and irregular fire continued most of the night. At the first alarm, given by a gun in the Walled City, the squadron, which had been sleeping under arms and fully dressed, was set to work patrolling the

streets as far as the river to prevent any uprising in the city. Captain Wheeler with his troop (E) was on outpost holding Block Houses 12 and 13. Only a few straggling shots came in from the south during the night, but at daybreak the insurgents, from their intrenchments, began to pepper the outposts and sweep the streets. All along the line subordinate commanders begged to be allowed to attack. At 8 A. M. General Anderson received the coveted permission. The "cowards" were turned loose, sweeping the stampeded insurgents out of their trenches and works, through swamps and paddy fields, into the river or back to the hills. In our immediate front, dense underbrush made progress slower, and also gave confidence to the insurgents, who here put up the most stubborn fight of the day. At length General Ovenshine ordered the troops on our right to make a turning movement, which proved too much for Filipino morale, and away they went. They were steadily driven farther and farther away from the city until about 4 P. M., when our forces were recalled to the line originally designated, *i. e.*, the road from San Pedro Macati to Pasay, on which outposts and supports were promptly stationed. Troops C, E and L, under Major Rucker, participated in this movement, the others continuing the patrol of the interior streets and communications.

The vim and dash of the American troops, coupled with the heavy Filipino losses on all sides, produced a demoralization among the insurgents from which they did not recover for several days. This time was utilized in strengthening our new position with trenches. On the night of February 9th Major Rucker received orders to report with three troops to General MacArthur, beyond Tondo on the north line, as a support to the Twentieth Kansas Volunteers. The distance from Pasay to the point finally designated was only about eleven miles, but before the command, groping about in the inky blackness, succeeded in finding the General and afterwards their place on the firing line, it was 4 o'clock in the morning, and they had marched over twenty miles. C, E and G participated in the battle of Caloocan the following day (the 10th) and returned to the First Division on the 12th.

The Fourth Cavalry seemed to be regarded as seasoned timber in the line of "chasseurs à pied," marching about as general utility and filling gaps when positions of troops were changed.

On the south line, between the 10th and 16th, I, K and L made daily reconnaissances around Parafñaque, where the enemy was concentrated in strength. The scouting generally brought on skirmishes, in which several horses were lost, but the men escaped injury until the 15th, when Private Ralph Wintler, K, was severely wounded.

The American preparations to advance northward along the railroad caused the concentration of all available insurgent forces on that side of the city, so that a season of quiet outpost and patrol duty ensued for the Second Squadron. C, G and L remained in front of Pasay until April 8th, officers and men sleeping and messing in the trenches.

In order to supply food for the native population of Manila, it became necessary to open up the Pasig River to the commerce of the lake (Laguna de Bay) districts. American garrisons at the head of the river would also cut the insurgent line of communications between Cavite and Bulacan Provinces. Accordingly early in March an expeditionary brigade under General Loyd Wheaton was organized, consisting of the Twentieth and Twenty-second Infantry, parts of the Oregon and Washington Volunteers, a section of artillery and the First Squadron of our regiment, Troop E being at the time mounted on its American horses. Lieutenant Ruth-erford joined from the States on March 2d, and assumed command of K, Lieutenant Carson taking up the duties of adjutant of the cavalry command.

Between March 10th and 17th, this brigade engaged and routed the insurgents at Guadalupe Ridge, Pasig, Pateros, Cainta and Taguig. In the advance on Pateros, March 14th, Troop E, which had the advance, was fired upon while crossing a ravine. The troop was quickly dismounted, and, after a lively fight, drove off the enemy, but not without considerable loss. Saddler Samuel Jones was killed, Captain Fred Wheeler was shot through the left hand and Privates Michael Good, George B. Parks, Horace H. Smith and Ernest Wilcox

were wounded. After garrisoning the towns of Pasig, Pateros and Taguig, the brigade was broken up and the squadron resumed patrol work from the Exposition barracks in the city. First Lieutenant Matthew A. Batson, who had been promoted to the regiment vice Elliott, joined Troop E March 20th. Transports sailing from the States carried, in addition to troops, large cargoes of quartermaster's and commissary stores, and some subaltern en route to join his regiment was picked up at San Francisco and detailed in charge. Lieutenant Batson, on the *Ohio*, was the first of many officers of the regiment to serve as transport quartermaster and commissary.

On March 24th the First Squadron was again attached to the Second Division and took part in the advance and engagements resulting in the capture of the insurgent capitol at Malolos. Blacksmith Rankin S. Nebinger (I), Privates Leroy Grundhand (E), and John Cotter (K), were wounded in skirmishes near LaLoma Church on the morning of the 25th. E Troop's fight on the same day well illustrates the obstacles overcome by American troops in Filipino engagements, and, as General MacArthur has termed it "a brilliant affair," it is described more at length.

When General MacArthur, commanding the division, approached the Tulihan River, Major (now Brigadier-General) J. F. Bell reported an insurgent force at the road crossing and requested a reconnoitering patrol. The General ordered Captain Wheeler to dismount half of his troop for the work. The insurgents, after destroying the bridge, had constructed between the wing walls on the north end a strong barricade, topped by an I bridge girder for a head piece, and leaving a horizontal opening just large enough to permit the firing of their Mausers. Further, to guard the crossing, they made two trenches on the river bank, about fifty feet long and about one hundred yards from the barricade on either flank. They also occupied a stone boiler house between the bridge and the western trench. Each trench had a head protection of bamboo and earth. The stream itself was about ninety feet wide with perpendicular banks over twenty feet in height. Against this formidable position, held by one hun-

dred insurgents, Captain Wheeler advanced with Lieutenant Batson and twenty-three troopers. Making good use of cover, the men crawled close to the south bank and opened fire on the west trench, the only part of the position that had been located. The tremendous fire received in reply revealed the whole position. A small detachment was sent to attend to the barricade, and Major Bell hastened back for reinforcements. A few well directed artillery shots (fired under his supervision) stampeded the insurgents, and in spite of their numbers, they fled pell-mell, our men, after fording the stream, being too exhausted to follow up their advantage.

Private William E. Tufts was mortally wounded; First Sergeant Alexander H. Davidson, Quartermaster Sergeant Charles Hiatt, and Private Harry A. Howe, were severely wounded; and Saddler Samuel H. Evans and Private Charles Rice slightly wounded in this encounter; but five dead Filipinos, two of them found behind the barricade itself, and many wounded carried away by their comrades, gave proof of E Troop's deliberate marksmanship. Captain Wheeler was still suffering from his wound of the 14th, and should properly have been on sick report. Major Bell's official report states:

"The small cavalry detachment of six men, firing at the barricade, had made ninety hits on the steel beam, besides those they put through the slot. The fire from the barricade had been entirely silenced for some time. * * * Though the coolness and courage of all the officers and men concerned was most admirable, I was especially impressed with the fearless imperturbability of Captain Wheeler, coolly directing the fire of his men and keeping them under cover. I do not know how a better example of courage could have been shown than that displayed by him as he stood exposed, trying to show a private just where an insurgent was concealed across the river. Just then a bullet struck the private in the head, splattering blood on the Captain as he fell. Quietly giving orders to have the poor fellow removed to the rear, he went on with his business. * * * I heard Lieutenant Batson say to a young soldier, who did not seem to see anything to shoot at, 'Here, if you are not going to use your gun, give it to me, I can see them,' and suiting his action to his words, he took the gun and began

Starting early April 22d, Novaliches was occupied before noon after sharp fighting in capturing successive insurgent positions along the road. The hardest work in the column was with the train of carabao carts. Many heat prostrations occurred. On the next day the road developed into a mere trail and eventually disappeared, the march continuing across country, through marshes and bamboo thickets and across foot-hills and mountain streams. The progress of the carts was hardly appreciable, two whole days being consumed in making the six miles to San José. The carabaos proved of little value in the hilly country. In rice fields where they may frequently submerge their bodies in water and mud, they are able to keep down the tremendous heat oppression from which they suffer. In order not to block the train the men cheerfully pulled and pushed the heavy carts while the animals rested.

At San José, Lieutenant Boyd with I Troop arrived on the afternoon of the 24th, reporting the Bocave column at Norzagaray. They had met with little opposition until they reached the bluffs near the town late on the 23d. Their whole force was deployed, but darkness came on before the town could be gained. Next morning before 7 o'clock, the garrison had been swept out and chased far into the hills. Private William Herr (I) was slightly wounded.

With the Bocave column arrived several mules and escort wagons, off the *Tacoma*, the first home transportation used in campaign in the Philippines.

The 26th of April found the whole column at Norzagaray with advance at Angat. On the day following, General Lawton with his command concentrated at Angat, was put in telegraphic communication with Manila, and received orders to remain where he was. His advance had produced the desired effect. Uncertain as to his objective, the insurgents were obliged to move to offer opposition to a possible flank attack, and General MacArthur pushed forward. Before moving he had scouted his front, K Troop running into a bad hole on the 23d while on reconnaissance with that indefatigable information gleaner, Major Bell. With the object of ascertaining the enemy's strength at Quingua,

One hundred and twenty-three killed and wounded of the enemy were picked up for burial or hospital care; twenty-six dead bodies lay in the trenches, exactly one-half of this number in our immediate front. The total American loss was three killed and five wounded. Private Joe Grabowsky (C) died on the 15th from his wound in the action. Lieutenant Eltinge was slightly wounded in the hand.

Captain Gale, Lieutenants Eltinge and Parker were each recommended by General Lawton for a brevet. First Sergeant Edward T. Balch (L) was recommended for a commission in one of the new volunteer regiments (he was subsequently commissioned) for "advancing alone within thirty yards of the enemy by wading river at Santa Cruz and shooting insurgent officer rallying enemy."

One small gunboat with a Nordenfeldt and a Hotchkiss gun, five steam launches and two cascos were discovered in the river at the town of Pagsanjan, about four miles further up the lake, when the town was seized on the 12th. After much hard work the boats were hauled over a bar at the mouth of the river, the expedition returning April 17th to Manila.

General Lawton was immediately placed in command of another independent column, the object of which was to relieve the pressure in front of General MacArthur, allowing him to advance up the railroad. The main body of the column, consisting of the Twenty-second Infantry, eight companies Third Infantry, eight companies North Dakotas, our dismounted squadron, Hawthorne's two mountain guns, and Scott's platoon of D, Sixth Artillery, assembled at La Loma Church April 22d. The remainder, consisting of eight companies Oregons and eight companies Minnesotas, with Troop I, mounted, assembled a day later at Bocave to bring a part of the train with rations and supplies. The objective was Baliuag, the main column to advance by way of Novaliches, San José, and Norzagaray, at which place the two parts of the column were to unite.

The Second Squadron was detailed as provost guard with Captain Gale as provost-marshal, orders assigning them as rear-guard on the first day's march.

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scouting into the mountains east of this town the march was resumed and San Isidro captured on the 17th, with only slight casualties, Privates Harris and Quinn being again specially commended for bravery.

The body of scouts, selected for coolness, intelligence and frontier experience, had demonstrated their ability in Filipino warfare. Where the ordinary detailed advance-guard would have delayed the column for a deployment, these resolute men brushed resistance aside, or, if it was too strong for them, had the situation well estimated for the commander of the supporting troops upon his arrival. The scouts became a feature of all subsequent operations.

Two columns were concentrated on Gapan, May 18th, as the insurgents were reported in force. The capture proved an easy affair, the squadron returning to San Miguel the same afternoon. At retreat on the 19th, the following telegram was published to all organizations of the command :

“HOT SPRINGS, VA., May 18, 1899.

“*Otis, Manila :*

“Convey to General Lawton and the gallant men of his command, my congratulations upon their successful operations during the past month, resulting in the capture this morning of San Isidro.

“WILLIAM MCKINLEY.”

May 21st, the squadron marched back to Baliuag to strengthen the garrison, reported from Manila as in danger of attack. General MacArthur's column had been depleted by the necessity of holding his long line of communications as he advanced up the railroad. He had many sick and worn-out men, and the rainy season was close at hand. From Washington came orders to return the State volunteers without delay. In the face of such conditions General Otis decided that a further advance was not feasible, and General Lawton's independent column, after capturing Arayat in General MacArthur's front, was broken up and the troops distributed to stations. The Second Squadron marched across to Malolos and thence proceeded, on May 27th, to Manila by rail. Troop I marched in, arriving the same date.

troop was with him in all of his subsequent campaigning. The march to Baliuag was made with a column on either side of the Quingua River, the right column developing stiff resistance, with a few casualties in the capture of San Rafael, where camp for the night was made. On the next day, at noon, the scouts of the right column were in possession of Baliuag. There had been skirmishing all the way from San Rafael, the enemy falling back in great numbers and retreating towards San Miguel. Captain Gale, with his squadron and Troop I, was sent out to endeavor to cut them off. After marching rapidly for three miles he encountered what appeared to be the rear-guard of the insurgent force in a strong position. The flanking and routing of the enemy left Captain Gale's command absolutely incapable of proceeding further; twenty-one men had fallen from heat exhaustion, eight of them in a comatose condition. After a sufficient rest, he returned slowly across the country to Baliuag.

Further dispatches from Manila held the command in this town for a week, during which the provost guard was busy distributing to the starving natives the immense stores of rice and sugar captured in the town. Lieutenant Stewart joined from the United States May 10th, and assumed command of Troop I.

Permission to advance announced San Isidro as the next objective. Anticipating serious opposition at Ildefonso, a reconnaissance party, consisting of the picked scouts, supported by a company of infantry, was sent out on May 12th to feel the place. The first news from this party was that it had fought its way into the town and held it. A garrison was promptly sent out. The same program was followed out the next day, resulting in the capture of San Miguel. The city had a garrison estimated at 300 men; nevertheless, a mere handful of scouts dashed across a bridge into the city, under a galling fire, and put the insurgents to flight. The pluck of these men earned for the eleven survivors a recommendation for congressional medals of honor. Three of them were Privates Eli L. Watkins (C), Simon Harris (G), and Peter Quinn (L).

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scouting into the mountains east of this town the march was resumed and San Isidro captured on the 17th, with only slight casualties, Privates Harris and Quinn being again specially commended for bravery.

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Troops E and K continued their arduous escort and reconnaissance work with the command along the railroad. On May 23d, while both troops under Major Rucker, accompanied by Major Bell and his scouts, were out on reconnaissance, the enemy was developed in force near the town of Santa Rita. The command was deployed, driving off the enemy after a sharp fight, lasting half an hour, in which Privates Joe Costello, Hans Matheson and Thomas J. Turner, all of K, were wounded. Major Rucker's orders were to avoid an engagement, and he accordingly withdrew to San Fernando as soon as the insurgent fire had been silenced.

Second Lieutenants Ward B. Pershing and Charles S. Haight, recently appointed, reported for duty from the States and were assigned to C and L, respectively.

The department commander appeared always to have on hand a piece of work in which General Lawton's push and pluck were essential. Returned to Manila, he was immediately assigned the task of clearing the Morong Peninsula (Laguna de Bay), where Pio del Pilar had become too aggressive. Our four troops, indulging in dreams of rest, were turned out at 8 o'clock on the evening of June 2d, in severe fighting trim and with cooked rations for one meal. The pumping station was reached at 11 P. M. Here they joined General Hall's brigade, consisting of two battalions Fourth Infantry, one battalion Ninth Infantry, six companies Colorados, eleven companies Oregons, one battalion Wyomings, and Hawthorne's Mountain Battery. General Lawton also controlled another column consisting of a battalion of Twelfth Infantry, the North Dakotas, and eight companies Washingtons, which was to cooperate in an endeavor to bag the enemy. The troops passed a trying night in bivouac. No fires were permitted, and a cold rain fell incessantly. The start for Antipolo was made at 5 o'clock A. M., June 3d, before the command could finish breakfast. The Fourth Cavalry was assigned to the advance. It is a curious fact that as long as the squadron was dismounted, we were generally fortunate enough to draw the leading position (probably because we were called "cavalry"). Yet after our troops were mounted, we spent months doing infantry

lined with abandoned trenches. The capture of an insurgent storehouse provided a much needed change of underwear and clothing, but the men, in the resulting mixed uniform, presented the appearance of opera bouffe pirates.

Cramped quarters and frequent wettings were now beginning to show their effects on the men, so Captain McGrath landed on a small island where a few drills took off the "sea legs," and "shore liberty" restored the men's spirits. On the 24th, word was received that the squadron would participate in an attack upon Calamba, the strongest insurgent position on the lake and one of the most valuable strategic points on the island. Knowing that the garrison was strong, General Hall brought six companies of the Twenty-first Infantry and a full battalion of the Washingtons from Manila in cascos, and General Lawton accompanied the expedition. Although timed to arrive early in the day, the landing in front of the town was not made until after 4 P. M. on the 26th, and then blunder followed blunder. The whole command was disembarked on the wrong side of a deep river, thirty yards wide, with the result that this stream had to be crossed in the advance; our squadron was forced to march across the entire infantry front to reach its prescribed position, and during a critical stage of the advance the gunboats fired on our line at 1200 yards.

When the squadron finally reached its place in line there were no mistakes made by the Fourth Cavalry. Captain McGrath advanced straight at the town, with L on the left, G in the center, and C on the right, of a line of skirmishers. About the time that L Troop struck the river the whole line was hotly engaged with the enemy, who were firing at short-range from positions concealed by the brush. Captain McGrath hurried to the river bank on the left. Seeing a small banca across the stream, he and Lieutenant Batson, without hesitation, swam the river and towed the boat back. Lieutenant Batson's leggings became entangled in some way, and he would probably have drowned if the Captain had not pulled him ashore. Eight men (good swimmers), with their carbines and belts in the banca and with the two officers, gained the insurgent side of the stream. Shouting to

Lieutenant Brown to push the line ahead, Captain McGrath boldly struck out with a yell to flank the enemy. The ten men must have looked like two hundred to the Filipinos, for they fled precipitately. Lieutenant Brown advanced the squadron rapidly for about a half-mile, vainly endeavoring to find a ford, when suddenly four shells from the gunboats struck within twenty yards of his line, and the Gatling gun began its well known mowing action with accurate range. Nothing demoralizes good men so badly as this fire from the rear. Lieutenant Brown ordered an advance out of the danger zone and into cover. Private Edward F. Olnhausen (C) was wounded at this stage. Fortunately the gunboats soon ceased firing, but it was then discovered that the insurgents had retreated round the right of the infantry and were enfilading the whole line.

After assisting in a disposition to meet this new situation, Lieutenant Brown left the infantry to handle the affair and hurried to the support of our small detachment, which could be heard firing on the other side of the river. A ford was discovered, and the squadron was soon in the town, to find that Captain McGrath and his small party had pushed the insurgents out so rapidly that all of the Spanish prisoners, including six officers, fell into our hands. Before reaching the town, however, the detachment had been swept by the Gatling guns and had had one desperate fight. Corporal Thomas Totten and Private Charles Gleerup (L) were killed, and Private Martin K. Hines (L) was wounded. The first named was shot in the back, and the wound was made by a large-caliber bullet. Also, while working through the town the detachment came under heavy fire from the enemy sheltered behind buildings and walls.

The conduct of Captain McGrath and Lieutenant Batson throughout the whole attack was so intrepid that they both received, upon General Hall's urgent recommendation, the medal of honor "for distinguished gallantry."

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soon located a body of over sixty insurgents in an old sugar mill and behind other good cover. With less than twenty-five men he charged the position, killing three and wounding two of the Filipinos, who had abandoned many rifles in their desperate efforts to escape.

As the Filipinos were seen to have joined a larger body in their rear, the whole squadron was turned out, driving them to the hills after a spirited engagement. In a similar affair on the 28th, Private John MacGregor (C) was wounded. Thereafter it became necessary almost daily to chase the enemy away from the outposts. They were loth to lose this key to operations, and continually harassed its garrison for over four months. Such trying work had reduced the troops to an effective strength of only fifty per cent., when, on August 13th, the squadron was ordered back to Manila to comply with G. O. 40, 1898, discharging men enlisted for the war. The weeks that followed were full of hard work, drilling recruits, straightening out papers and property after the long period of field service, and equipping for the fall campaign, which all knew would be a busy one.

During the first six months of 1899 many changes in officers had been recorded at the regimental headquarters in the States. Colonel Compton rejoined on January 6th; Captains Hatfield and Dorst were promoted to be majors and were succeeded by Captain T. R. Rivers (F) and John A. Lockwood (D), the latter, by mutual transfer with Captain Wilder, retaining the command of M; First Lieutenant Kirby Walker came to the regiment, vice Lockwood, and First Lieutenant A. M. Davis, vice Slavens, appointed quartermaster; Second Lieutenant Craig transferred to the Sixth Cavalry, and was succeeded by Second Lieutenant John J. Boniface.

The act of March 2d, providing for an increase of two captains for adjutant and quartermaster and four lieutenants for regimental commissary and squadron adjutants, promoted First Lieutenants Neall, Cameron, and Walsh, the last named, to the regret of all, being thus transferred out of the regiment. Second Lieutenants Smedberg, Rutherford, Carson, Cassatt and Hawkins gained their bar, and the following youngsters were assigned in their places: Charles

landed 191 of his 200 horses, they showed the effects of the long voyage as soon as hard campaigning was encountered.

August 13th saw the whole regiment present for duty in Luzon. It is to be remembered that the last six troops to arrive had complied with G. O. 40 before sailing. Hence, while all the troops of the regiment now had fully eighty per cent. recruits, the original six had the advantage, in that their twenty per cent. old men had all been under fire.

As soon as the new troops had stowed away their horse equipments and heavy property, they were promptly sent out of Manila for outpost work. A and F left on July 30th for the Mariquina Valley; B and M on August 4th for the Deposito (Manila reservoir). On August 12th an expedition was directed against the town of San Mateo, in the Mariquina Valley, seven miles north of the pumping station. Captain James Parker, commanding the expedition, with Troop B and parts of companies of the Twenty-first and Twenty-fourth Infantry (250 men in all), advanced along the main road on the left bank of the river. Captain Rivers, with 100 men from A and F, marched across country on the right bank. The two columns were to unite at the town with a third coming from Novaliches, consisting of a battalion of the Twenty-fifth Infantry under Captain Cronin of that regiment. About half way to the town, Captain Parker's column encountered the enemy stationed behind intrenchments that completely controlled an extended flat covered with submerged rice paddies, and swept the road which led straight up to the trenches.

The advance across this bullet-raked open country was executed in faultless style in spite of the large percentage of recruits and the fact that it was "first engagement" for all hands. Sergeant J. C. Robertson (B) was killed and Private Charles Jabelman (B) seriously wounded in the first stages of the fight, and the infantry suffered a heavy loss; but there was no hesitation, no shirking. The trenches were carried, succeeding positions captured after brisk fighting, and the town of San Mateo itself occupied shortly after noon. Captain Parker in his report highly commends the conduct of Lieutenants Dudley and Boniface, First Sergeant

G. W. Moffitt and Quartermaster-Sergeant Samuel Adams, both of B.

Captain Rivers' progress had been slower, due to the entire absence of roads. After a laborious march of three miles it became necessary to capture two outposts in strong position on adjacent hills. The nearest was carried after a sharp fight and the garrison of the second fled to avoid being cut off. The command was halted an hour to rest the exhausted men. Resuming the march, the advance-party soon developed the enemy on a ridge perfectly controlling a deep ravine perpendicular to the line of march. Under their stiff fire Sergeant Nicholas Sebellius (F) was instantly killed. Reply to the fire appeared to be of little value, as the Filipinos were perfectly concealed and were using smokeless powder. The officers were assembled for consultation. It was evident that the force in front was the former garrison of the outposts; a succession of parallel ridges allowed them to retreat to new positions, and the men were not physically fit to do the flanking work required; opposition to Captain Parker's advance had ceased. Accordingly, Captain Rivers withdrew his command and returned to camp, having seen nothing of the column from Novaliches. The latter had also been obliged to march across country, and did not reach San Mateo until long after the time planned, although the enemy was not encountered. Acting under orders, Captain Parker, with his own and Captain Cronin's force, returned to the pumping station the following day. Apparently it was not considered policy to leave a garrison at San Mateo at this time. The insurgents promptly re-occupied the town and it was twice subsequently captured by the Americans. The record for captures lies between San Mateo and one other town, of which Mr. Dooley says: "Whiniver ye're in doubt, take Porac."

The horse transports, *Wyfield* and *Conemaugh*, arrived in the bay on the 16th and 18th. Troop F was relieved from Mariquina on the 18th and returned to the city to "stand to horse." Men and horses were marched next day to our new rendezvous, the Pasay cavalry barracks. A full set of nipa barracks for twelve troops and the band, with officers'

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FILIPINO LABOR.

BY FIRST LIEUTENANT CHAS. O. THOMAS, JR., FIRST CAVALRY.

SO much has been said and written detrimental to the Filipinos as laborers, that I wish to give my experience in working them for the past year and a half.

As depot and constructing quartermaster at Batangas, P. I., during the construction of the post of Camp McGrath, I had on my rolls as many as 1,500 day laborers of all classes, carpenters, stonemasons and common laborers. The post was built by native labor, only six American carpenters being employed as foremen.

That "Filipinos cannot work equal to Americans," is true, but when one considers the difference in a day's pay, twenty-five cents to thirty-five cents for the native laborer, \$1.50 for the American, \$1.25 to \$1.50 for the Chinese, one should not expect quite so much.

Again, where are you to find the American labor in these islands that will or can handle the pick and shovel for eight hours a day? It may be here, but it is not looking for such jobs as yet, nor will it so long as teamsters are as scarce in the Islands as they are now and have been for the past two years.

It is not fair to the native to compare his labor with the American labor, if, at the same time, you do not take into consideration the difference in wages. First, we will take up the common laborer or peon, as he is called out here. In the construction of Camp McGrath at Batangas, I employed over a thousand of this class of native laborers daily and paid them twenty five cents a day. Anything like this number of American laborers could not be had in these Islands for any price, but almost daily some American would

come along that needed work and would be willing to work for \$1.25 to \$1.50. You will readily see that one American laborer at \$1.25 must do the work of five natives. I found that he could do that for one or possibly two days; but he could not keep it up, and after the native learned how to use the American pick and shovel, the ratio would drop to two, or at the outside three, natives to one American.

In working the native laborer you cannot afford to rush him at the start; take him a little slowly at first until he is accustomed to you and your methods, but more especially until he is acquainted with your system of paying. Once you get his confidence he will do a lot more than otherwise.



ROAD-MAKING WITH FILIPINO LABOR.

Second, we will take up the Filipino carpenters, and see what can be said in their favor. I employed more than 500 of them. At first my American carpenters had to teach them how to use American tools. They brought along with them saws that looked like the cross-cut saw we use in the States to saw up stove wood. It took two men to use them, and then they would or could not saw to the line; but they quickly learned the use and the value of the American saw, and before Camp McGrath was completed many of them became first-class carpenters. The style of construction and the plans were all different from anything they had ever seen before and, naturally, they did not take hold at once as

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Now, take up the stonemason. You will find this class of laborer the most skilled of all. Possibly this is because so many of the buildings throughout the islands are made of stone. Native masons are to be had in large numbers. They chop out their own stone from what is called out here "adobe rock." It is a soft stone that becomes hard when exposed to the air, and is used throughout the islands for the construction of buildings and bridges. They are very slow, but their work is entirely satisfactory when finished. On the completion of Camp McGrath, I was detailed to build the post here at Los Baños. Very nearly all my old carpenters, stonemasons and laborers followed and were employed on the work. These two posts stand to-day as illus-



FILIPINO LABORERS WORKING AT THE QUARRY.

trations of what skilled and unskilled Filipino labor can do. The stone bridge now building here is being built entirely by Filipino labor. No Americans are employed other than the teamsters who bring the materials. This bridge when finished will be 71 feet high, 210 feet long and 32 feet wide. To work the Filipino successfully, you must first apply system to your work and, when he understands you, he will prove satisfactory. Discipline in the work and among them can be just what you care to make it, and such a thing as a strike is never heard of. They have their little "kicks," and the man that works them successfully is the one that will listen to their complaints and will settle them. Anyway

American carpenters would have done ; but after the first house was finished, there was little trouble with any of the others. Four of these native carpenters, on the completion of Camp McGrath, were able to take an American plan and erect a building with very little if any assistance from the foreman.

Now we will compare the wages of the Filipino carpenter with that of the American, the Jap and the Chino. I have tried them all.

First-class American carpenters want from \$125 to \$150 a month ; the next grade want from \$75 to \$90 per month ; Japs \$50 to \$60 and a ration ; Chinos \$40 to \$50 and a ration. Natives I paid from forty cents to \$1.25 a day, only a few drawing over seventy-five cents.



OFFICERS' QUARTERS UNDER CONSTRUCTION AT CAMP MCGRATH, P. I.

My experience at Camp McGrath taught me that of the four different nationalities of carpenters I had on the work, the Filipino was the best for the money. I do not mean that he is the best carpenter, for the Filipino is not a skilled carpenter ; but on rough work, such as the quarters erected out here are, the Filipino carpenter will save any contractor money, if he will only learn how to work him, and that is no great task. Japs, though, are finished carpenters, and I kept some eight or ten all the time to do finishing work ; but when it comes to raising the building they are not to be compared with the Filipinos. Japs are afraid of falling where the Filipino would not give it a thought.

monthly from the start, but appreciated the fact that they had very little to live on, so I adopted the above system. I have always had all the laborers I could use, and have used a good many, believing that, if it took one man one hundred days to complete a job of work, one hundred men could do the same job of work in one day and not cost any more. I not only worked a good many Filipinos, but collected them by the hundreds and sent them to other constructing quartermasters throughout the islands.

If I had the employment to offer the native, I do not hesitate to say I could get two thousand laborers, carpenters and stonemasons in two days. A few days ago I told my native foreman to ask the natives in my employ if they would like to go to Panama and help build the canal, and, if you were here to-day, you could hear them say, "We are going with the Teniente to Panama to build the canal when we finish this work." They could be contracted with to go to Panama to work on the canal for a term of two years, and I believe would prove to be among the best classes of workmen that could be had for that country. Their wages would, of course, have to be advanced beyond what they are paid here, but in the end they would do a lot of work for a little money. "Give the devil his due." The Filipino is the best laborer I have seen in these islands, considering the wages paid.

This information is compiled from one and one-half years' experience as depot and constructing quartermaster at Batangas, as constructing quartermaster at Los Baños, and as superintendent and disbursing officer of the Calamba-Los Baños-Bay road for the Civil Government.

LOS BAÑOS, LAGUNA PROV., P. I.,
June 24, 1904.

SURRA.

BY CAPTAIN CHARLES D. RHODES, GENERAL STAFF, U. S. ARMY.

NEARLY every cavalry officer who has served in the Philippines since 1901, is well acquainted with the characteristics of this fatal animal disease, although for some time many things were believed of it, which have since been disproved.

My own regiment, the Sixth Cavalry, stationed in the Islands from 1900 to 1903, almost entirely in Southern Luzon, suffered unusually from the epidemic, and at the time of our departure for the United States, the question of eliminating or at least controlling the disease, appeared to us to be the paramount cavalry question of the day.

In my own troop (C) we lost about twenty-five horses and ten mules—not all at once, but by ones and twos, stretching over a period of a year and a half. Nothing appeared to cure the disease, and although theories as to its causation and transmission were quite lavishly manufactured, no one was certain of his ground, and the disease continued to run its course. I have never known a well established case of surra to recover.

Surra was often confounded with the native form of glanders, and we were told that it had existed among native stock for many years. This, as has since been demonstrated, was a mistake, for from all accounts it was not introduced into the Philippines until 1901.

There was a quite general idea, too, that native grasses were responsible for its transmission; and again, that swampy drinking water was a factor. At one time it was thought to be infectious, later simply contagious, and still later, neither infectious nor contagious. The dissimilarity

of opinions held by officers is shown by the succession of general orders and circulars, emanating from the headquarters, Division of the Philippines, prescribing regulations for the treatment of surra. Up to the present time (1904), however, no system of treatment for the *cure* of surra has been discovered, but our knowledge of the disease and its transmission has advanced to such a point, that the measures as to its *prevention* have proved efficacious.

The Inspector General, Division of the Philippines, has furnished the General Staff of the Army, which has been interested in the matter, with the following statement:*

"The mortality from surra among the U. S. Government animals in the Philippine Islands during the past year (1903-1904) has been much less than during any preceding year since the disease appeared. Since July 1, 1903, approximately 200 public animals have been destroyed in the division on account of surra. This decrease is due not to any form of treatment after infection, but to increased and efficacious precautions against infection. Surra has been confined to no general section or sections; animals have been destroyed at twenty-seven different stations, involving sixteen provinces and ten islands. Total suppression of the disease in the islands cannot be hoped for under existing conditions, since no preventive measures are being observed by private individuals to stamp out the disease, and to prevent its spread among private stock. Not only are horses, mules, and carabaos subject to this disease, but also dogs, rabbits, monkeys, rats and many other animals, domestic and wild.

"Attention is invited to G. O. 103, Headquarters Division of the Philippines, 1903, copy enclosed.

"Referring to precautions to be observed relative to old rice fields, and low, swampy ground subject to overflow, it should be remarked that while it is believed that contraction of surra cannot be traced directly to grazing in such localities, or to use of grass from same, yet such conditions are liable to cause diseased feet, scratches and wounds about the feet, legs, and mouth, and it is well known that such localities are prolific in flies, mosquitoes, and other insects which are known to carry infection. The order prescribes that temperatures be taken in the early morning; experience has taught that midday is the better time for taking same.

*Furnished through the Chief, M. I. D., Manila, P. I., dated July 8, 1904.

“Relative to question No. 3, I have no definite or reliable information. Captain George P. Ahern, Chief Philippine Forestry Bureau, should be able to supply full information upon the subject. The general opinion of cavalry officers as to the future supply of horses for the Philippine Islands is not well known to me. My opinion is that for draft purposes mules are in every respect far preferable. For saddle purposes, it is believed that a cross between the native stallion and our hardy Western mare of moderate size would produce a horse ideally adapted to island service. The experiment is certainly worth thorough and systematic trial.”

The most valuable treatise on surra which has appeared, is the recent report * of Musgrave and Clegg, of the U. S. Biological Laboratory, Manila, which reviews among other things the history of the disease, its ætiology, modes of transmission and infection, symptomatology, course, duration, prognosis, and treatment. It is a highly technical and scientific report on the disease, and a brief synopsis of its main features and conclusions cannot fail to be of interest to all officers, who have had or will have to do with the care of cavalry or draft animals in the tropics.

Surra is a form of disease due to a parasite called *Trypanosoma*, with a distinctive surra species known as *Tr. evansii* or *Tr. brucei*. The generic disease Trypanosomiasis has been known for generations in India, and has annually destroyed millions of dollars worth of animals in India, Africa, and South America. More recently the surra epidemic has invaded the Islands of Java, the Philippines and Mauritius, the latter island becoming infected during the South African War.

As to climate, the transmission of the disease seems to be coincident with periods of wet weather, for no other reason it appears from our present knowledge, than that such climatic conditions are most favorable to insect life, and that insects (principally biting-flies) carry infection.

So far as horses are concerned, foreign animals do not

**Trypanosoma* and Trypanosomiasis with special reference to surra in the Philippine Islands, by W. E. Musgrave, M. D., acting director Biological Laboratory, and Moses T. Clegg, assistant bacteriologist, Biological Laboratory (Department of Interior, Manila, 1903. No. 5).

appear more susceptible to surra than native ponies, as proved by experience with Philippine, Chinese, Australian, and American horses. Sex and color appear to play no part in the communication of the disease; and age, only in part, from the fact that the older horses are more prone to have wounds, favoring the introduction of parasites.

The present theory of the transmission and infection of surra depends solely upon the theory of biting flies and insects; and exhaustive experiments have shown that in the absence of the original parasitic organism or host, and of biting insects, the disease does not spread. Experiment also shows that the disease is not contagious, nor can it be transmitted congenitally; and it does not appear to be transmitted by coition, unless some wound of the genitals permits the blood to become infected.

One of the most important points which the biologists appear to have demonstrated, is that surra is not transmitted through sound mucous membrane of the alimentary canal, and according to present knowledge the surra parasite is not to be found in food and water. All artificial attempts to infect the latter have failed. If this be true, as seems most probable, the danger from native Philippine grasses is eliminated, unless the animals have lesions of the mucous membrane or cuts on the skin, which might permit infection, supposing that for a brief interval food and water serve as culture media for the parasites. Horses fed on oats and hay have been equally as susceptible as those fed on native grasses; and, after attempting to infect water with the parasite, injection of this water under the skin of a healthy animal has failed to produce the disease.

To sum up, exhaustive experiments, continued for more than a year, on horses, dogs, goats, rabbits, guinea-pigs, monkeys, cats, and rats, have failed to produce the slightest evidence that infection by food, drink or otherwise ever occurs in mucous membrane which is perfectly sound.

"Surra is essentially a wound disease, and transmission through the injured mucous membrane results when infected material is brought in contact with it."*

* Preliminary report of Musgrave and Williamson.

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PREVENTION.

All efforts to cure the disease in the Philippines have failed, and there appears to be slight prospect of evolving a successful method of treatment. Prevention is then our only hope.

In South America the disease usually disappeared among animals removed from marshy regions to high, dry ground; animals removed to stalls in South America and in Africa also appeared to fare better. In Java quarantine regulations were adopted and enforced, and it was recommended that animals afflicted with surra be isolated, or killed and buried. Both sick and healthy animals were transferred to dark, spacious, well-ventilated stalls, where few if any flies were to be found. Cleanliness about the stalls was required, fecal and refuse matter were removed, and in some cases smoke fires were made to drive away the flies.

In the Philippines the following measures are recommended in the report of Musgrave and Clegg:

1. (a) The destruction of all infected horses, mules and other animals of economic importance, according to systematic inspection by sanitary inspectors; and, after death, the removal of the bodies to crematories or to places of burial in a fly-proof wagon, or one protected by mosquito netting.

(b) The destruction of rats. In Manila there are annually thousands of rats destroyed on account of the plague; in the provinces the systematic poisoning of rats is recommended.

(c) The destruction of game and other wild animals.

2. The destruction of stinging and biting insects, more particularly the biting flies. This is best accomplished by destruction of their breeding places, by the proper disposition of fecal matter, the burning of all offal, and general cleanliness about stables and corrals.

The most recent methods for the destruction of mosquitoes is well known. The destruction of fleas is as yet an unsolved problem.

3. The treatment of contact animals: Quarantining for seven days contact animals exposed to surra; and contact

Of the biting insects which have been suspected of transmitting the disease, biting flies have repeatedly been shown to transmit the infection; fleas transmit the surra of rats (*Tr. lewisii*) from rat to rat, from dog to dog, and from rat to dog; and transmission by mosquitoes, lice and ticks has not yet been determined. While the transmission of surra to horses by ordinary flea bites has not yet been established, our knowledge of the transmission of the disease through skin wounds, leads one to believe that open sores on horses' legs would be readily subject to infection by fleas as well as by flies.

The first symptom to be noticed in an animal infected with surra is a rise of temperature, followed by a remittent or intermittent fever. Later the animal becomes stupid, with watery discharges from the nose and eyes, hair rough; and finally the discharges become more profuse, emaciation develops, the genitals and dependent parts become much swollen, the gait becomes staggering, and death follows. During the progress of the disease the parasites mechanically destroy the red blood corpuscles, resulting in progressive anemia. Experiment has shown that the period of incubation in artificially contracted cases of surra in horses is usually from four to seven days, although it may be more; and it is believed that the incubation period in naturally contracted cases does not vary more than in experimental cases.

In the Archipelago the duration of the disease in horses has been found to be from fourteen days to three months, and is about the same for American, Chinese, Australian and native horses.

With mules the symptoms are in general similar to those of horses, but in the Philippine Islands the disease is with them of longer duration.

Besides being found in many animals, cases have been reported of surra parasites having been found in the blood of human beings, but so far in the Philippines no cases have been met with.

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(Tr. Lewis)
to do
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t

... subsequently protected for forty-eight hours
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... ointment, washing with solution of creolin, or by
burning smudges.
4. Additional measures of prevention for individual
horses are avoidance of allowing them to stand for any
length of time during daylight in a group of other horses,
cleanliness of stables, screening stalls and keeping sores
covered with suitable ointment, such as tar or iodoform oint-
ment, to keep off flies.

TACTICAL PROBLEMS AND THEIR SOLUTIONS.

SUITABLE FOR SOLUTION AT SMALL CAVALRY GARRISONS.

MAP PROBLEM. CAVALRY SCREEN. SHEET NO. I.

General Situation.

THE Brown army has beaten the Blue army near Charlottesville (seventy miles southwest of Manassas), and has lost contact with it. The Blue army is supposed to have retreated towards the northeast.

Special Situation (Brown).

The Brown cavalry corps is pushing northeast, trying to regain contact with the Blue army.

The First Cavalry (Brown) is advancing by the Warrenton Pike. At 5 A. M. 15th October, 19—, its headquarters and Third Squadron are at New Baltimore (five miles south of Thoroughfare Gap). The First Squadron is at Buckland, and the Second at Thoroughfare Gap.

To carry out the instructions of the regimental commander, the major of the First Squadron, at this hour, gives the following verbal order to the captain of Troop A:

“Contact has not yet been established with the Blues, but inhabitants say they are retreating by roads north of Antioch. Our regiment will continue along Warrenton Pike, its left connecting with the Sixth Cavalry along the road Antioch-Woolsey, and its right with the Eighth Cavalry along Broad Run and the road Millford Mill-Manassas. The First and Second Squadrons will continue in the advance, and regimental headquarters and the Third Squadron will march in reserve on the Pike.

“Troop A will take the Warrenton Pike, keeping touch with the Second Squadron on the left and with Troop B on

the right. The Second Squadron will reach Thoroughfare at 6 o'clock (A. M.). Troop A will start at 6 A. M.

"Troop B will march in rear of Troop A to Gainesville; thence by the Gainesville-Bristow Road and the first road to the east to the Rollins house; thence eastward by the road Wellington—Newmarket X Roads—Balls Ford.

"I will march with Troop B."

Note. You are in command of Troop A. Its strength is 100 troopers. All streams on the map, except Broad Run and Bull Run, are fordable at all points.

Required:

1. What would be the position and disposition of the troop at 6:15 A. M.?
2. What means will you take to establish communication with the Second Squadron?
3. Describe in detail how you conduct your troop from the time it starts till it enters Gainesville. (Note: No enemy is found at Gainesville.)
4. What buildings do you particularly have searched at Gainesville?

Map: Manassas Maneuvers.

SHEET NO. 2.

Special Situation (Brown) Continued.

A private letter found in the post office at Gainesville, dated "Hickory Grove, Oct. 14, 19—," states that a large force of Blues has been passing through that place during the last two days.

Required:—To whom and how do you communicate this information?

SHEET NO. 3.

Special Situation (Brown) Continued.

At the fork-of-roads between Wayne and Burrel on the Warrenton Pike you meet a trooper from one of your advanced patrols conducting a negro. He says the negro has just come from Catharpin, and reports that he saw some Blue cavalry there yesterday.

No signs of the enemy have been seen along your route so far, and the troops to your right and left have informed you that they have seen no signs of him. The inhabitants all say that no Blue forces have marched along the Pike for several weeks.

Required:

1. The questions you ask the negro.
2. What disposition do you make of the negro?

SHEET NO. 4.

Special Situation (Brown) Continued.

From the negro you learned that a force of Blue cavalry, he thought about 500, was at Catharpin at sunset yesterday. He thought it marched north from there.

On your arrival at a point 1,000 yards farther east on the Pike you receive word from the troop on your left, that its patrols have seen two or three Blue scouts who retreated toward the northeast.

At the same point a messenger from your leading patrol brings information that from a window in the Swartz house two Blue troopers, apparently vedettes, had been seen in the edge of the first wood east of that house.

The troop on your right reports no signs of enemy as yet.

Required:

1. How the noncommissioned officer of your leading patrol conducted his patrol after the discovery of the two Blue troopers.
2. What you do with the information received.

SHEET NO. 5.

Special Situation (Brown) Continued.

At Pageland Lane a message from your advanced patrol informs you that the two Blue troopers fled to the northeast beyond Douglas Heights, and that the way is clear to Groveton. Also that the people of Groveton state that they have seen several small parties of Blue cavalry since day-break; that one party came from the direction of Sudley

Springs, one by Lewis Lane, and several from the direction of the Stone Bridge.

You proceed to Groveton. There messages from three of your advanced patrols report a party of the enemy at least as large as a half troop at Buck Hill.* The patrol on the Pike has had to fall back, and the other two are halted in observation.

Required: Describe your dispositions on passing Groveton.

SHEET NO. 6.

Special Situation (Brown) Continued.

Having conducted your troop under cover to the wood south of the Henry house, it is discovered by the Blue detachment at Buck Hill, which makes its escape at the gallop in the direction of Poplar Ford.

Your patrols proceed toward the Stone Bridge, which they report is held by a strong force of Blues. From the Henry house you see with your glasses a number of guns, you estimate four batteries, on the hill at A. F. Kendall's (northeast of Poplar Ford).

The troop on your left reports that Sudley Ford is held by the Blues, and that a line of trenches is occupied on the ridge south of the Sudley mansion.

The troop on your right reports Ball's Ford held in force by the Blues.

Required:

1. The message (on message blank) that you send back.
2. From all the information you have gained what do you conclude concerning the Blue army?

SOLUTION—SHEET I.

Answer 1.—We will suppose that Troop A was ready to mount and start. As the enemy is in retreat he has probably stuck to the main roads in order to travel as fast as possible. We desire to recover contact as soon as practicable, therefore we must make good time. The country is close and wooded, so the troops must keep on the roads.

*Stone House is at the foot of Buck Hill.

No signs of the enemy have been seen along your route so far, and the troops to your right and left have informed you that they have seen no signs of him. The inhabitants all say that no Blue forces have marched along the Pike for several weeks.

Required :

1. The questions you ask the negro.
2. What disposition do you make of the negro?

SHEET NO. 4.

Special Situation (Brown) Continued.

From the negro you learned that a force of Blue cavalry, he thought about 500, was at Catharpin at sunset yesterday. He thought it marched north from there.

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At the same point a messenger from your leading patrol brings information that from a window in the Swartz house two Blue troopers, apparently vedettes, had been seen in the edge of the first wood east of that house.

The troop on your right reports no signs of enemy as yet.

Required:

1. How the noncommissioned officer of your leading patrol conducted his patrol after the discovery of the two Blue troopers.
2. What you do with the information received.

SHEET NO. 5.

Special Situation (Brown) Continued.

At Pageland Lane a message from your advanced patrol informs you that the two Blue troopers fled to the northeast beyond Douglas Heights, and that the way is clear to Groveton. Also that the people of Groveton state that they have seen several small parties of Blue cavalry since day-break; that one party came from the direction of Sudley

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SHEET NO. 6.

Special Situation (Brown) Continued.

Having conducted your troop under cover to the wood south of the Henry house, it is discovered by the Blue detachment at Buck Hill, which makes its escape at the gallop in the direction of Poplar Ford.

Your patrols proceed toward the Stone Bridge, which they report is held by a strong force of Blues. From the Henry house you see with your glasses a number of guns, you estimate four batteries, on the hill at A. F. Kendall's (northeast of Poplar Ford).

The troop on your left reports that Sudley Ford is held by the Blues, and that a line of trenches is occupied on the ridge south of the Sudley mansion.

The troop on your right reports Ball's Ford held in force by the Blues.

Required:

1. The message (on message blank) that you send back.
2. From all the information you have gained what do you conclude concerning the Blue army?

SOLUTION—SHEET I.

Answer 1.—We will suppose that Troop A was ready to mount and start. As the enemy is in retreat he has probably stuck to the main roads in order to travel as fast as possible. We desire to recover contact as soon as practicable, therefore we must make good time. The country is close and wooded, so the troops must keep on the roads.

*Stone House is at the foot of Buck Hill.

The second lieutenant will trot forward on the Pike with a corporal and six men in the form of "Bonie's points." At 6:15 it would have about reached the junction with the Carolina road.

A sergeant and four men would trot out toward Thoroughfare via Carter's to try to establish connection with the Second Squadron. It would about have reached Ford's at 6:15.

The troop with a scout or two a few hundred yards ahead of it, would start out at a walk in column of twos. At 6:15 the head of it would be a little beyond the midway point between the first two creeks the Pike crosses.

Answer 2.—I would have ordered the patrol which started toward Thoroughfare not to go much beyond Carter's, because, since the Second Squadron was to pass through Thoroughfare at 6 o'clock, the sergeant could not expect to find any part of it at Thoroughfare if he should go on thither. He ought, however, to meet a patrol from that squadron near Carter's. So his orders would be to scout a little beyond Carter's, then to turn east and rejoin the troop by the Carolina road.

On reaching the Carolina road I would send another patrol of a noncommissioned officer and four men up it toward Haymarket. One or the other of these patrols would surely meet a patrol from the Second Squadron.

Answer 3.—Although Troops B, C and D would all be between my troop and Broad Run, as I know that B would be behind me at this time, and as I suppose from the nature of the country that C and D must also start out behind me on the Pike, I would detach a patrol of a noncommissioned officer and four men to scout toward McCrea's Ford unless I had been informed that one of the troops behind me would look out for it. I would also have the by-roads and farm houses explored as well as it could be done without at all delaying the march. I should not, however, consider this of much importance unless some signs of the enemy were found in the roads. No large force of a fleeing army could be hidden in woods or farm houses without leaving some signs along the roads.

Before arriving within striking distance of Gainesville I should expect to receive a message from my second lieutenant telling me whether or no the town was occupied by hostile troops. As (according to the terms of the problem) no enemy was found at Gainesville by my second lieutenant's patrol, I would march into the town without any special precautions. The lieutenant would, of course, have explored the town in the prescribed way before entering it with his patrol. As I should want to give the officer's patrol time carefully to approach and examine Gainesville, I would march the main body of the troop at the walk most of the way to that town.

Answer 4.—Unless my second lieutenant had already done so before my arrival, I would have the post office, telegraph and telephone stations, and the railway station searched. If I needed maps of the country I would have the school house and any real-estate dealer's office searched. Gainesville is not a county-seat, so there is no court-house. There are probably no public buildings there besides the school.

SHEET NO. 2.

Answer.—As the squadron commander is with Troop B, which came as far as Gainesville in rear of my troop, he would probably not be far away, and I would hand the letter or send it to him.

SHEET NO. 3.

Answer 1.—When did you leave Catharpin? How far do you live from there? About what time of day was it when you saw soldiers there yesterday? How were they dressed—describe their clothing? About how many do you think there were? How many saddle horses do you think they had? How many soldiers were there besides the ones on horseback? How did the men and horses look—fresh or tired? Did you notice any cannons or any wagons? Which way did they come from? How long did they stay in town? Which way did they go when they left? What did they appear to be doing in the town? How did they and the town

people seem to like each other? About how long was it
~~the first of them appeared in the town until~~
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Before arriving within striking distance of Gainesville should expect to receive information from the patrol, I should take the precaution the town is on patrol. As a result, march the way to that

Answer

done so before the school house Gainesville There are no school.

Answer.—

which came would probably or send it to 1

Answer 1.—

do you live first when you saw dressed—describe think there were they had? How on horseback? tired? Did you way did they come Which way did appear to be doing



EXERCISE ON THE TERRAIN. CAVALRY SCREEN. SHEET NO. I.

General Situation.

(TROOPS IMAGINARY.)

An independent division of the (Brown) Army of The Missouri has concentrated at Platte City, Missouri, preparatory to a forward movement against a similar force of the Blue army, reported to be moving eastward from the vicinity of Valley Falls, Kansas.

Special Situation (Brown).

HEADQUARTERS FIRST (BROWN) CAVALRY,
FIRST CORPS, ARMY OF THE MISSOURI.

FIELD ORDERS }
No. 6. }

FORT LEAVENWORTH, KAS.
28 Oct., '04, 1:00 P. M.

1. The enemy is reported moving eastward from the vicinity of Valley Falls, Kansas. Our First Corps is at Platte City, Missouri.

2. The regiment will at once move out as a screen to locate and delay the advance of the enemy, until our main body is across the Missouri River. The screen disposition will be such as to cover all roads leading to the west between Kickapoo on the north, and Metropolitan Avenue on the south.

3. (a) Major A—— will command the contact troops consisting of the First Squadron and Troops E and F of the Second Squadron.

(b) Major B—— will command the Third Squadron in support, disposed in columns of two troops each, in rear of the centers of the right and left wings, respectively, of the contact troops.

(c) Troops G and H will constitute the reserve and will be reported at once to the regimental commander.

4. The pack trains will be concentrated at Fort Leavenworth, until further orders.

5. Communications addressed to the regimental commander will reach him at Fort Leavenworth until 4 P. M., at which hour further instructions will issue.

By order of Colonel D——

E—— F——,
Captain and Adjutant First Brown Cavalry,
Adjutant.

Dictated to Squadron Adjutants.
 Copy to Regimental Commissary.
 Copy to Regimental Quartermaster.
 Copy to Regimental Surgeon.
 Copy to Corps Commander.

You receive the following:

*The Commanding Officer, Troop B, First Brown Cavalry,
 Present:*

SIR:—Complying with the provisions of Regimental Field Orders No. 6 (copy herewith), you will at once proceed with your troop via the route 1-3-7-11-23-25-27-51. Keep contact with Troop A on your right and Troop C on your left.

By order of Major A——— H—— K——
1st Lt. and Squad. Adj. 1st Cav. (Brown).

Required: 1. State briefly the number of patrols you will at once send out—give strength and composition of each—and instructions to each (number patrols from right).

2. What consideration governs the question of strength of patrols in this case?

Time allowed, twenty-five minutes.

Refer to Fort Leavenworth map and also to large-scale map in JOURNAL No. 54.

SHEET NO. 2.

Special Situation (Brown) Continued.

When you arrive near Hancock Hill, a messenger brings you information to the effect that the Millwood Road bridge across Salt Creek is destroyed, and that the high stage of the water renders a crossing very hazardous.

Required:

1. Mention the general direction in terms of the points of the compass, in which a messenger must travel from your present position, in order to reach the reserve of the screen.

2. Is the country to the west and north especially adapted to cavalry used as a screen, or do you think the ground is too broken?

3. Would you be compelled to hold your troop on the main road or are you able to spread out across the country?

4. Under the conditions of the problem, which is the more important in your case, security or information?

5. State definitely (a) How much dependence you place on your patrols when considering your own security. (b) How much dependence the corps commander places on the first Brown cavalry for security.

Time allowed, twenty minutes.

SHEET NO. 3.

Special Situation (Brown) Continued.

You are at the junction of the Millwood Road with one leading to the north. You decide to make a personal reconnaissance of the settlement which you descry to the north.

Required:

1. A brief report in the form of a message to the proper address, containing information of a military nature obtained by you during your reconnaissance.

Time allowed, forty-five minutes.

SHEET NO. 4.

Special Situation (Brown) Continued.

The following message arrives from a patrol to the west:

Patrol No. 1. 21 28 October, '04, 3:10 P. M.
Troop B, 1st Cav.

The Commanding Officer, Troop B, First Brown Cavalry, Between 9 and 11 (main road):

Road branches here to west, southwest and south. Blue patrols of unknown strength on all branches within one-quarter mile of forks. Cannot advance. Am undiscovered.

L—,

Sergt. Troop B, Comm'dg Patrol.

Required:

1. The means you purpose taking in order to supplement the above information.

2. How far are you from Fort Leavenworth?

3. How do you intend to notify the commanders of the troops on your right and left with a view to obtaining their coöperation in the move contemplated in your answer to the first question on this sheet?

Time allowed, twenty minutes.

SOLUTION. SHEET 1.

Answer 1.—I will send out three patrols; the patrol on the right (No. 1) will be composed of six troopers under a noncommissioned officer; its orders are to move out to the right front, and to stick to roads, sending individual scouts to its front, and for the examination of particular points. It will also be charged with maintaining communication with the troop on my right until further orders.

The second patrol will be under the command of an officer and will consist of two sets of fours; it will move out to the front on the main road, and will be from about a mile to a mile and a half in advance of the remainder of the troop. The patrol commander is charged with rapid reconnaissance to the front and flanks with a view to preventing the surprise of the main body. He also has enough men to hold an important point in case he develops the enemy, until he can be reinforced, or be directed to fall back, as the case may be.

The third patrol will move out to cover the left front with orders corresponding to those of patrol No. 1. Its composition, too, will be the same.

Answer 2.—The main consideration is that the safety of the troops of the screen depends upon the information their patrols send back. This consideration demands that the patrols be small, so that they will not unduly attract attention. They must be strong enough to brush aside small observation patrols of the enemy if met, and to permit of the sending of information to the rear without being rendered too weak.

SHEET 2.

Answer 1.—Southeast.

Answer 2.—I am of the opinion that the area mentioned is unusually favorable for the action of cavalry on screening duty. It is not too broken, and parallel and lateral roads abound.

Answer 3.—I can send patrols in any direction, and am able to spread out to any extent desirable.

Answer 4.—Information, for the reason that it dominates security.

4. Under the conditions of the problem, which is the more important in your case, security or information?

5. State definitely (a) How much dependence you place on your patrols when considering your own security. (b) How much dependence the corps commander places on the first Brown cavalry for security.

Time allowed, twenty minutes.

SHEET NO. 3.

Special Situation (Brown) Continued.

You are at the junction of the Millwood Road with one leading to the north. You decide to make a personal reconnaissance of the settlement which you descry to the north.

Required:

1. A brief report in the form of a message to the proper address, containing information of a military nature obtained by you during your reconnaissance.

Time allowed, forty-five minutes.

SHEET NO. 4.

Special Situation (Brown) Continued.

The following message arrives from a patrol to the west:

Patrol No. 1. 21 28 October, '04, 3:10 P. M.
Troop B, 1st Cav.

The Commanding Officer, Troop B, First Brown Cavalry, Between 9 and 11 (main road.):

Road branches here to west, southwest and south. Blue patrols of unknown strength on all branches within one-quarter mile of forks. Cannot advance. Am undiscovered.

L—,

Sergt. Troop B, Comm'dg Patrol.

Required:

1. The means you purpose taking in order to supplement the above information.

2. How far are you from Fort Leavenworth?

3. How do you intend to notify the commanders of the troops on your right and left with a view to obtaining their coöperation in the move contemplated in your answer to the first question on this sheet?

Time allowed, twenty minutes.

SOLUTION. SHEET 1.

Answer 1.—I will send out three patrols; the patrol on the right (No. 1) will be composed of six troopers under a noncommissioned officer; its orders are to move out to the right front, and to stick to roads, sending individual scouts to its front, and for the examination of particular points. It will also be charged with maintaining communication with the troop on my right until further orders.

The second patrol will be under the command of an officer and will consist of two sets of fours; it will move out to the front on the main road, and will be from about a mile to a mile and a half in advance of the remainder of the troop. The patrol commander is charged with rapid reconnaissance to the front and flanks with a view to preventing the surprise of the main body. He also has enough men to hold an important point in case he develops the enemy, until he can be reinforced, or be directed to fall back, as the case may be.

The third patrol will move out to cover the left front with orders corresponding to those of patrol No. 1. Its composition, too, will be the same.

Answer 2.—The main consideration is that the safety of the troops of the screen depends upon the information their patrols send back. This consideration demands that the patrols be small, so that they will not unduly attract attention. They must be strong enough to brush aside small observation patrols of the enemy if met, and to permit of the sending of information to the rear without being rendered too weak.

SHEET 2.

Answer 1.—Southeast.

Answer 2.—I am of the opinion that the area mentioned is unusually favorable for the action of cavalry on screening duty. It is not too broken, and parallel and lateral roads abound.

Answer 3.—I can send patrols in any direction, and am able to spread out to any extent desirable.

Answer 4.—Information, for the reason that it dominates security.



Answer 5.—(a) No dependence whatever, beyond the information they are expected to send back. The patrol ahead on the main road may make a stand, but no dependence is placed upon its ability to do so.

(b) None whatever. Information is the important thing.

SHEET 3.

*Answer 1.—*Troop B First Cavalry, Kickapoo, Kas., Oct. 28, 1904. 3:30 P. M.

No. 2.

The Commanding Officer (or Adjutant) First Cavalry, Fort Leavenworth, Kan.:

Kickapoo, Kansas, on bluff overlooking and one-half mile from Missouri River. Population about fifty. Two churches and one school house of wood, capable of sheltering 500 troops. Forage plentiful, other supplies limited. The Missouri Pacific Railroad has station here; no telegraph instrument, eight wires, siding, is on heavy grade to north. Water good and plentiful. Camp site excellent for any number of troops. Good defensive position. Numerous horses, beeves and some poultry.

C—,

Captain, Commanding Troop B.

SHEET 4.

*Answer 1.—*Move up promptly to the patrol sending the information, and send scouts to work round towards both flanks; also notify the patrols immediately on my flanks; cover is excellent, so nothing can interfere with my scouts except superior numbers of the enemy.

*Answer 2.—*Five and one-half miles.

*Answer 3.—*By courier along the road 9-11-13, and to the front (west) from 9 and 13.

Note: In the solution of the foregoing problem, brevity was insisted upon in the answers. No maps were given to or allowed the officers who were solving the problem. They were thus compelled to use their own judgment and depend upon the evidence of their own senses. The problem was solved on the ground.

MANEUVER WITH TROOPS.* CAVALRY SCREEN.

General Situation.

A Brown army is advancing through Missouri to invade Kansas, which is defended by a Blue army.

Special Situation (Brown).

The First Brown corps will cross the Missouri River between Atchison and Leavenworth. Its Third Division, screened by the First Brown cavalry, will cross at Fort Leavenworth.

The First Brown cavalry crosses the river just before noon, October 31, 1904, and the regimental commander immediately issues the following order :

- | | |
|-----------------------------|---|
| FIELD ORDERS, }
No. 2. } | HEADQUARTERS FIRST BROWN CAVALRY,
FORT LEAVENWORTH, KAN., 31 Oct., '04. 12 Noon. |
|-----------------------------|---|
- I. A division of the enemy is camped near Lowemont, Kansas. Our division is advancing on that place, and billeted at Platte City last night.
 - II. This regiment will continue to screen the advance of our division, and will resume its march at 1:20 P. M. to-day.
 - III. (a) The First Provisional Squadron will move by the road X-3-5-Kickapoo-17.
(b) The Second Provisional Squadron will move by the road 1-3-5-7-63-Lowemont.
(c) The Third Provisional Squadron will move by the road A-B-D-E-F-20.
(d) The Fourth Provisional Squadron will move by the road Prison Lane-C-2-8-36-44.
 - IV. The Reserve will remain at Fort Leavenworth until 4 P. M., and will then follow the Third Provisional Squadron.
 - V. The pack train escorted by one officer and fifteen troopers from the Reserve will follow the Reserve at one mile.
 - VI. The regimental commander will be with the Reserve.

By order of Colonel F.,

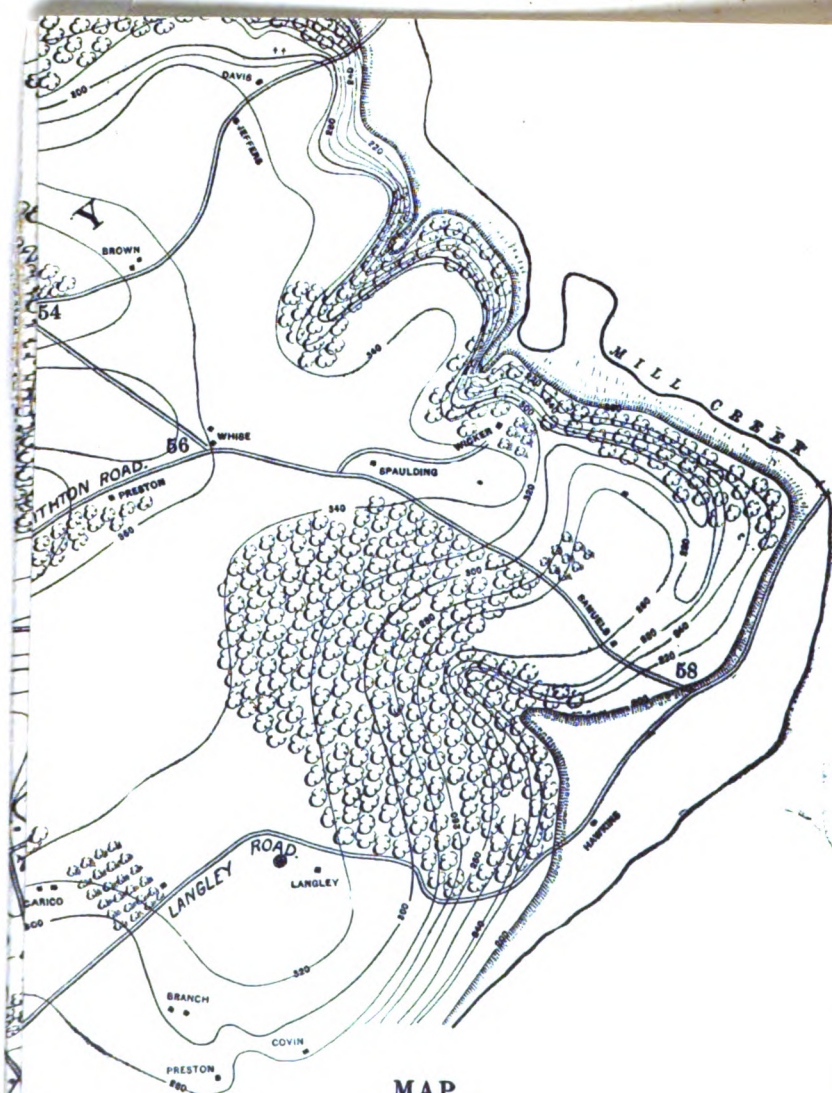
G. H.

Adjutant First Cavalry.

Dictated to
Field and Staff Officers
and captains commanding Prov. Squadrons.
Copy to Division Commander.

Fort Leavenworth map.

*The enemy is imaginary.



MAP
of the
MANEUVER GROUNDS
near
WEST POINT KENTUCKY
Surveved under the direction of

MAP PROBLEM. ADVANCE GUARD. CAVALRY.

(West Point Map.)

General Situation.

A Brown army at Corydon, Indiana, controls the country north of the Ohio River. The country south of the Ohio River is in the possession of the Blues, whose army is concentrating at Bowling Green, Kentucky.

Special Situation (Brown).

Having learned of the collection of enemy's stores at various points in Kentucky along the line of the Illinois Central Railway, the Brown commander detaches the First Brigade, First Division, Cavalry Corps, with orders to find and destroy the Blue depots, and to gain information of the enemy's forces. The engineers are charged with the construction of a ponton bridge across the Ohio River to Greenley, Kentucky, ready for the passage of the cavalry brigade by 8 o'clock A. M., August 14, 1904. In compliance with these instructions, Brigadier General O., commanding the designated brigade issued the following order:

FIELD ORDERS, {
NO. I. }

HEADQUARTERS FIRST BRIGADE, FIRST DIVISION,
CAVALRY CORPS, BROWN,
DOGWOOD, INDIANA, 13 August, '04, 3 P. M.

Distribution of Troops:

1. Advanced Guard.
Major A. B. C., 1st.
Cavalry.
1st Squadron, 1st Cavalry.
2. Main Body (In order of march).
1st Cavalry (less 1st Squadron).
2d Cavalry.
3d Cavalry (less two troops).
3. Rear Guard.
Captain F. G. H., 3d Cavalry.
Troops L and M, 3d Cavalry.

1. The enemy is concentrating in the vicinity of Bowling Green, Kentucky, and has established supply depots at various points in that State along the line of the Illinois Central Railway.

Our main army is in the vicinity of Corydon, Indiana.

2. This brigade will cross into Kentucky with a view to gaining information of the enemy and finding and destroying his depots.

3. The advance-guard will march at 6 A. M., to-morrow, and cross the Ohio River by the ponton bridge to Greenley, Kentucky, whence it will proceed via the Louisville & Nashville Pike toward Vine Grove, paying especial attention to the line of the Illinois Central Railway.

4. The main body will follow the advance-guard at 1,500 yards.

5. The rear-guard will follow the main body at one-half mile.

6. No baggage will accompany the command.

7. Reports will reach the Commanding General at the head of the main body.

By command of Brigadier General O.

R. S. T.

Capt. First Cavalry, Adj. Gen'l.

Copy to
Regimental Commanders.
C. O. Advance Guard.
C. O. Rear Guard.
Brigade Quartermaster.
Brigade Commissary.
Brigade Surgeon.
Adjutant General First Division, Cavalry Corps (Brown).

Note: The strength of a troop of cavalry is taken to be three officers and 100 enlisted men.

Dogwood, Indiana, is situated nine and one-half miles north of Greenley, Kentucky.

Corydon, Indiana, is about nine miles north of Dogwood. Vine Grove, Kentucky, is ten miles south of Stithton. Bowling Green, Kentucky, is seventy miles south of Stithton.

Required: Discuss the situation from the standpoint of Major A. B. C., First Cavalry, commanding the advance-guard, and what steps he will take to carry out the provisions of Field Orders No. 1.

Write the order of Major A. B. C., First Cavalry, for the operations of August 14th.

SOLUTION.

The country north of the Ohio River is controlled by the Browns. Moreover, the engineers who are charged with the construction of the ponton bridge across the river, have preceded the cavalry column as far as Greenley, Kentucky; hence the advance-guard will be relieved from the performance of reconnaissance duty until it shall have crossed the Ohio and entered the enemy's country. It rests with Major A. B. C. to determine whether or not he will conduct his squadron as a compact body to Greenley, and there take up his advance-guard formation, or whether he will make the primary division of his force into vanguard and reserve before he reaches that point. As he is to precede the main body by forty-five minutes in leaving camp at Dogwood, he will be permitted to gain his distance of about two miles from the head of his advance-guard to the head of the main body without increasing the gait over the regular rate of march at the beginning of the day's work. This was evidently the intention of the brigade commander in directing

the advance-guard to precede the main body at the time indicated in Paragraph 3 of Field Orders No. 1. In this connection, therefore, all that Major A. B. C. has to do is to conduct his squadron across the river to Greenley and there form his advance-guard so as not to delay the march of the main body. So far as the data will permit, his plans for the operations of the advance-guard should be formed in advance, and his orders distributed so that the troops can move out from Greenley in proper formation without delay.

The province of the advance-guard is to provide for the security of the main body and furnish it with all necessary information, reconnoitering the country for a distance of three miles on either side of the line of march and paying especial attention to the line of the Illinois Central Railway. The reconnaissance must include search for the enemy's stores, so that the brigade commander may be informed of the presence of such stores at any point. The destruction of these stores when found do not come within the province of the advance-guard. The time necessary for the destruction of property would delay the march of the advance-guard and hence limit its reconnaissance. The results to be obtained must be clearly stated in the orders issued by Major A. B. C., so that there will be no doubt of their being understood by his troop officers, upon whom the duties of the reconnaissance will fall.

The road over which the column is to march is fixed by Field Orders No. 1. To the west of this road, and running nearly parallel to the railway, is the Pilcher's Point, Dickson and Bloomington Road. A body of cavalry marching by way of this road would be able to keep in close touch with a patrol on the line of the railway itself, and at the same time reconnoiter the country east of Otter Creek, including the towns of Garnettsville and Grahampton. One platoon could accomplish this result, detaching scouts or small patrols to cover the roads to the west of the indicated road. The detachment of a larger force than a platoon would weaken the advance-guard without accomplishing any greater results. This flanking detachment is not in the nature of a "flank guard," but is charged with the duties of

observation. Moreover, it should be a part of the vanguard and under the orders of the vanguard commander. While it might appear that the designation of a platoon to perform this duty, and outlining the road by which it would advance would better be within the province of the vanguard commander, still Major A. B. C. is justified in impressing his view of the necessity of this reconnaissance upon his subordinate officer, leaving to him the working out of the details for its accomplishment. By mentioning it specifically in his advance-guard orders, Major A. B. C. becomes assured that his wishes will be accomplished, an assurance he could not feel if the vanguard commander had gained a different idea of the requirements of the situation. The line of the Illinois Central Railway is mentioned in Field Orders No. 1, which direct that "especial attention" be paid to its reconnaissance. This work should be entrusted to an officer's patrol so as to guarantee its successful performance. Mention of this also comes properly in the order of the advance-guard commander.

To the east of the line of march lies the town of West Point. This place should be reconnoitered by a force larger than a small patrol. Another platoon from the vanguard could perform this reconnaissance, and then march by way of Fort Hill, 2-28-26-24-22-20-36-38-40, etc., parallel to the main line of march and covering the left bank of Salt River and Mill Creek. There are a number of side roads leading out to the east from this road, and if this flanking detachment were composed of only one squad, but few small patrols or scouting parties could be sent to reconnoiter each road without completely frittering away the strength of the party, or else so delaying its advance that it would be unable to keep pace with the main advance-guard. Intermediate roads should be covered by small patrols, sent out from the vanguard and maintaining connection with the two flanking patrols above mentioned.

The use of two platoons has now been arranged. Assigning two troops to the vanguard would permit the vanguard commander to detach two platoons for flanking detachments and retain one and one-half troops for use on the

main line of the advance and on the roads branching from it. This division of the squadron gives :

Vanguard: Troops A and B, First Cavalry.

Reserve: Troops C and D, First Cavalry.

The command of the vanguard would devolve upon the senior captain on duty with the troops assigned to it, but he should be mentioned by name in the order, so that there could be no question upon the part of officers or noncommissioned officers as to whom they should send their reports to when out with patrols. The position of Major A. B. C., as advance-guard commander, is properly with the reserve, so that he would retain command of that body himself. Nevertheless he should mention this position in his orders so that messengers would know where to find him without delay.

Having outlined his plan for the following day, Major A. B. C. may either distribute his orders on the evening of the 13th of August, or he may wait till the following morning. Field Orders No. 1 provide for the assembling of the squadron ready to march by 6 A. M. on the morning of the 14th. By calling his troop commanders together a few minutes before 6 o'clock, he will be able to give them their orders so that they can march off at once, with the orders fresh in their minds. If, during the night, additional information about the enemy should come, or any change be made in the orders from brigade headquarters, he could incorporate such change in his orders the following morning and not be compelled to announce that previous orders issued the night before had to be modified. Hence, it will be best to give his orders verbally to his troop commanders just before the squadron moves out from Dogwood.

Field Orders No. 1 state that the brigade will march in the direction of Vine Grove, Kentucky. The advance of the brigade into the enemy's country is dependent upon a number of contingencies, none of which can be foreseen. Hence, Major A. B. C. can only fix the road by which his vanguard is to march, leaving the destination to be determined as the circumstances of the case may arise, or as may be fixed by further orders from brigade headquarters.

Major A. B. C., therefore, directs that his officers assemble at 5:50 A. M., August 14th, to receive orders; the squadron to be formed ready to march at 6 A. M. The orders issued follow:

ADVANCE-GUARD ORDERS, }
 No. 1. } FIRST SQUADRON FIRST CAVALRY,
 DOGWOOD, INDIANA, 14 August, '04, 5:50 A. M.

Distribution of Troops:

1. Vanguard.
 Captain L. M.
 Troops A and B.
2. Reserve.
 Troops C and D.

1. The enemy is concentrating in the vicinity of Bowling Green, Kentucky, and has established supply depots at various points in that State along the line of the Illinois Central Railway.

Our main army is in the vicinity of Corydon, Indiana.

Our brigade will cross into Kentucky with a view to gaining information of the enemy, and finding and destroying his depots.

2. This squadron will act as advance-guard to the brigade, and will reconnoiter for the enemy and his depots.

3. The vanguard will march at once and cross the Ohio River by the ponton bridge to Greenley, Kentucky, whence it will proceed via 1-3-B, and the Louisville & Nashville Pike toward Vine Grove, Kentucky. It will reconnoiter the country for a distance of three miles on either side of the line of march. One platoon will be detached to march via the road Pilcher's Landing—15-13-21-23-25-59-61-79-77-89-91, reconnoitering as far west as Otter Creek. One platoon will be charged with the reconnaissance of West Point and the line of Salt River and Mill Creek. An officer's patrol will reconnoiter the line of the Illinois Central Railway. Intermediate roads will be covered by small patrols.

4. The reserve will follow the vanguard without distance as far as Greenley, Kentucky, where it will halt until the vanguard shall have gained 1,200 yards.

5. Reports will reach the advance-guard commander at the head of the reserve.

By order of Major C.

W. H. R.,

1st Lieut. and Squadron Adjt. 1st. Cavalry,

Adjutant.

Verbally to assembled troop commanders,
 Copy to Adjutant-General First Brigade.

EXERCISE ON THE TERRAIN. ADVANCE AND REAR GUARDS.

General Situation.

(Troops Imaginary.)

A Brown corps is concentrating at Atchison.

A Blue corps is marching north along the Missouri River from Kansas City, Kansas.

Special Situation (Brown).

One Brown division has not arrived at Atchison. In order to enable this division to reach Atchison before the enemy can attack that point the Brown commander sends a provisional cavalry brigade south to meet and retard the advance of the Blue corps.

This provisional brigade has arrived at Fort Leavenworth. You have command of the advance-guard, which consists of one squadron, of four troops, of one hundred men each, with orders to proceed via Pope and Grant Avenues to Leavenworth, thence south along the Leavenworth-Kansas City Road. Upon encountering the enemy you are to take advantage of every opportunity to retard his advance so that the main body of the cavalry can prepare and occupy a defensive position.

SHEET 1.

Question.—Describe the position and formation of your advance-guard when the main body is at the corner of Pope and Grant Avenues.

SHEET 2.

Your advance party from near Grant Hill reports three of the enemy's infantry patrols in sight near the northern edge of Leavenworth.

Question.—What information will you endeavor to obtain?

SHEET 3.

You have ascertained that the enemy has a large force and that he is advancing along Grant Avenue.

Question 1.—What action will you take?

Question 2.—What disposition will you make of your advance guard?

SHEET 4.

The enemy has deployed a large force and is preparing to attack. You must withdraw.

Question 1.—Describe the manner of your withdrawal.

Question 2.—Draw a diagram showing the formation of your rear guard when the reserve is at the corner of Grant and Pope Avenues.

Refer to Fort Leavenworth map and large-scale map in JOURNAL No. 54.

SOLUTION—SHEET 1.

Answer.—The reserve and vanguard should each consist of two troops. The support should consist of two troops (less two platoons) and the advance party of two platoons.

The reserve should be on Grant Avenue 800 yards in advance of the main body; the support 700 yards in advance of the reserve; the advance party 500 yards in advance of the support; and the point 100 yards in advance of the advance party. Allowing for the road space occupied by the troops, viz.: reserve two troops 200 yards; support, one and one-half troops, less flankers, about 125 yards; and the advance party about 25 yards; total, 350 yards; plus distances, gives a grand total road space of 2,450 yards. The point would consequently be opposite Grant Hill. There should be three flanking parties sent out from the support. One of these, consisting of four men and a noncommissioned officer, on the River Road (Farragut Avenue) which should at this time be at the Rock Island bridge; one of the same size on the Prison Lane near the cemetery; and the other, consisting of eight men and a noncommissioned officer, on Atchison Pike and near Atchison. There should be two flanking parties from the advance party, which should be about 300 yards to the right and left, respectively, of the advance party.

SHEET 2.

Answer.—The advance party should endeavor to ascertain at once whether the patrols belong to an outpost of a stationary force, an advance-guard of a marching body, or a flanking detachment of a column. They should lose no time in learning the position, composition, disposition and action of the enemy's main body.



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SHEET 3.

Answer 1.—All information concerning the enemy would at once be sent to the commanding officer of the main body. The commanding officer would also be informed that the advance-guard would take up a position along Pope and South Merritt Hills with the view of delaying the advance of the enemy.

Answer 2.—The advance party would be instructed to dismount and to take up a position running through Hill 860, falling back slowly if the enemy advance in superior numbers. Two platoons would be sent from the support to the new penitentiary to prevent the enemy turning my right flank. The remainder of the support and the reserve would dismount and occupy a line on the military crest in front of Pope and South Merritt Hills. In order not to be exposed to fire while falling back the advance party on Grant Hill would, when forced to retire, withdraw by way of Corral Creek and the railroad to Rabbitt Point.

SHEET 4.

Answer 1.—Before the enemy could advance sufficiently to become dangerous he would have to drive the two platoons from the new penitentiary or also be subject to an enfilade fire. These two platoons would take position on Hill 880 (south of South Merritt Hill) and would assist in covering the withdrawal of the reserve. The support would next withdraw under cover of the fire of the rear party. If the enemy was pushing his advance with a great deal of vigor, it might be necessary to have the support withdraw by detachments. For instance, the two platoons on Hill 880 might assist the rear party in covering the withdrawal of one troop of the support. After the support was in motion the rear party would withdraw, the point and flankers being the last to leave.

Answer 2.—The strength of the subdivision of the rear guard would remain as in the advance guard.

There should be one right flank patrol on the River Road, and two left flank patrols—one on Sheridan Drive and one

on the Garden Road, each consisting of four men and a non-commissioned officer. The support would be about, at this time, 700 yards in rear of the reserve on Grant Avenue. There should be a right and left flanking party from the support—the first on Farragut Avenue, about Rabbit Point, and the second on Prison Lane. The rear party would just be leaving Pope and South Merritt Hills, with the point and flankers preparing to retire.

MANEUVER WITH TROOPS.

ADVANCE AND REAR GUARDS. SHEET I.

General Situation.

A division of the Blue army is in camp about twenty miles north of Fort Leavenworth, on the west of the Missouri River. A division of the Brown army is in camp about twenty miles south of Fort Leavenworth, on the west of the Missouri River.

Special Situation (Blue).

A report having been received by the division commander to the effect that a large number of arms intended for the enemy is hidden in the Missouri Pacific depot, at Leavenworth, a special reconnaissance of one squadron has been sent to capture the arms. The reserve of the advance-guard, marching via West End Parade, Farragut Avenue and Fifth Street has reached the West End Parade, when you receive orders to relieve the advance guard (imaginary) with your troop and proceed to Leavenworth. Accordingly, you will form advance-guard at 1:30 P. M. to-day and proceed over the route designated.

Note: When recall is ordered by the senior umpire, the troops will be assembled and marched back to the West End Parade and dismissed.

MANEUVER WITH TROOPS.

ADVANCE AND REAR GUARDS. SHEET 2.

General Situation.

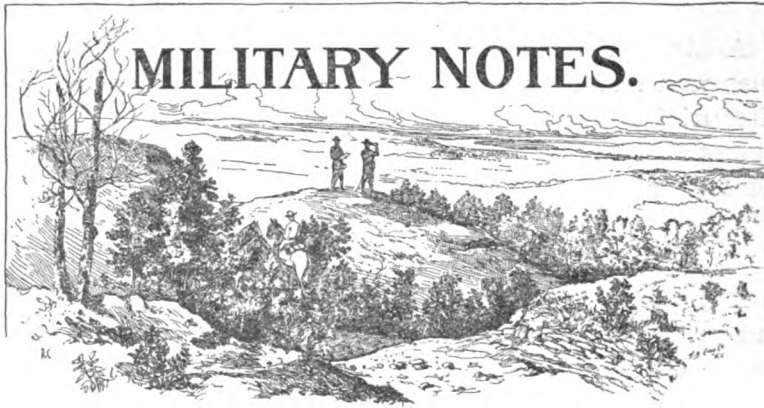
A division of the Blue army is in camp about twenty miles north of Fort Leavenworth on the west side of the Missouri River. A division of the Brown army is in camp about twenty miles south of Fort Leavenworth on the west side of the Missouri River.

Special Situation (Brown).

A report having been received by the division commander, to the effect that a large number of arms, intended for the enemy, is hidden in the old Post Exchange building at Fort Leavenworth, a special reconnaissance of one squadron has been sent out to capture the arms. The reserve of the advance-guard, marching via Leavenworth, Fifth Street, Farragut Avenue and West End Parade has reached the corner of Dakota and Fifth Streets, when you receive orders to relieve the advance-guard (imaginary) with your troop. Accordingly you will form advance-guard at 1:45 P. M. to-day and proceed over the route designated.

Note: When recall is ordered by the senior umpire the troops will be assembled and marched back to the West End Parade and dismissed.

Refer to Fort Leavenworth map, and large-scale map in JOURNAL No. 54.



THE COLT'S REVOLVER.

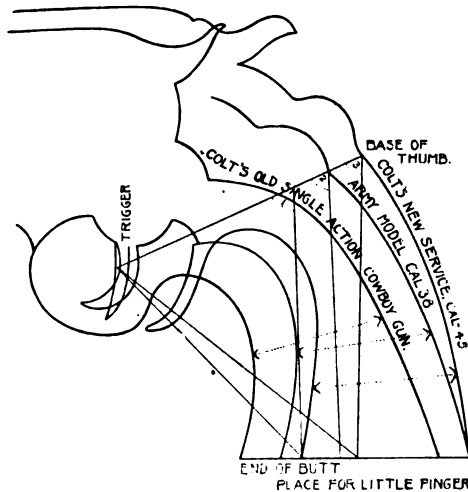
BY CAPTAIN ALONZO GRAY, FOURTEENTH CAVALRY.

IT is interesting to make a comparison of the different models of the Colt's revolver, and to consider how they affect the cavalry service.

1st. The "cowboy gun," single action, caliber .45, the model in use by the army up to about 1892. The general outline of the different makes of this model is the same, the only difference being in minor details, such as attaching the ejectors. The caliber is all right. It is better expressed by saying that it is not too small. The chief objection to the pistol is its ejector, which blows off, and is slow of action. I recently armed my troop with this pistol, on account of its caliber, and about half of the ejectors have blown off. A serious objection to it is, that it constantly shoots loose. The shape is such that it is easily manipulated (see triangle No. 1, cut), the relative distances between trigger, base of thumb and butt being such that a man with a short clumsy hand can cock it easily by placing the little finger under-

neath the butt. To sum up this pistol, its shape is good, its caliber excellent, its mechanism very poor, the single action being no particular disadvantage.

2d. The present Army Model, caliber .38, (see triangle No. 2, cut) has a better mechanism, but every cavalry officer will admit that it was a great mistake to reduce the caliber. The single action feature is not so desirable as No. 1 on account of its larger triangle. This triangle is enlarged by reason of the trigger's being set forward to give greater leverage to the double action. The mechanism is somewhat delicate, and no ordinary soldier has any business taking it apart. I might here say that I consider any length of barrel



over five inches as superfluous and a nuisance. An effort has been made to make this an arm of precision, and it is no doubt more accurate than No. 1, as proved by the fact that my troop this year averaged twenty per cent. less armed with No. 1 than it averaged last year armed with No. 2. However, as we used black powder, I am not prepared to say that a smokeless powder will not give better results. I believe it will. I have no objection to the double action, but I do not regard it as essential. If a man had a stiff or lame hand, the double action would be better.

3d. The so-called "New Service" revolver is in many ways an improvement. I learn that the name "New Ser-

vice" is one adopted by the manufacturers, and not, as many suppose, because there is any intention on the part of the War Department to adopt it. The caliber is all right; the length of barrel is good; the mechanism is splendid and much less liable to get out of repair than the caliber .38. An ordinary soldier can clean it inside without any damage to the pistol. The double action feature is easier for the reason that the trigger is set farther forward than it is on the caliber .38, thus increasing the length of leverage, but the triangle is thereby enlarged. This triangle is further enlarged by making the butt three-eighths of an inch longer; thus the triangle, formed by the first finger on the trigger, the little finger under the butt and the thumb on the hammer, is so great that the hand of ordinary size cannot readily manipulate the piece.

In using the double action, many men can only reach the trigger with the tip of the first finger; and, in using the single action, few men can place the thumb on the hammer and the little finger underneath the butt. The extra length of the butt can be remedied by simply cutting it off. There is no mechanism in the lower half. If the butt were cut off one-half inch, the revolver would be all right for single action, and the double action feature is not important.

The swivel for a lanyard is good, and should be retained. The lanyard should be issued, and the open cowboy holster should be adopted for use on the right side, with the butt carried to the rear.

During my service here I have repeatedly seen soldiers riding through a bunch of Moros with their revolvers reversed in the holsters so that they could get a quick shot. It is often just as important for a cavalryman to get a quick shot as it is for a cowboy.

I now get to my pet hobby, which is caliber.

It would be interesting to take a census of the opinions of all cavalry officers and learn just how they stand on this subject. If they, with few exceptions, all want a .45 caliber, and I believe they do, there is no logical reason why they should not have it. We are the persons that have to fight with the weapon and whose lives are dependent upon its effective-

ness. Nobody need talk about precision. One wants his opponent to stop when he is hit, and one would take no more satisfaction in being killed by a European after he had been fairly hit than one would in being cut down by a Moro.

This "New Service" model, if a half inch were cut off the end of the butt, is the best yet put out by the Colt people. There is every reason why it should be adopted and issued with smokeless powder and leaden bullets; and there is absolutely no reason why it should not be adopted and issued at once.

MALABANG, MINDANAO, P. I.,
May 10, 1904.

THE WEBLEY-FOSBERY AUTOMATIC REVOLVER.

BY CAPTAIN GEORGE VIDMER, ELEVENTH CAVALRY.

I AM not writing this article to bring up a discussion of the merits of the large caliber pistol, for I believe that the majority of officers who have had actual experience during the last few years, will uphold me in the statement that the small caliber revolver, or pistol, is a failure.

The .38 caliber belongs to this class, and I believe we committed a grave error in ever giving up the .45, even though the style was antiquated. We must have stopping power; not a shock that will stop for a short time—not a nervous shock, but a good, hard knock-out blow for both man and beast. We do not need a long-range weapon; one that will shoot up to seventy-five yards is sufficient. The pistol is needed at a short range only—the greater number of times under twenty-five yards. Then we need one that will shoot quickly.

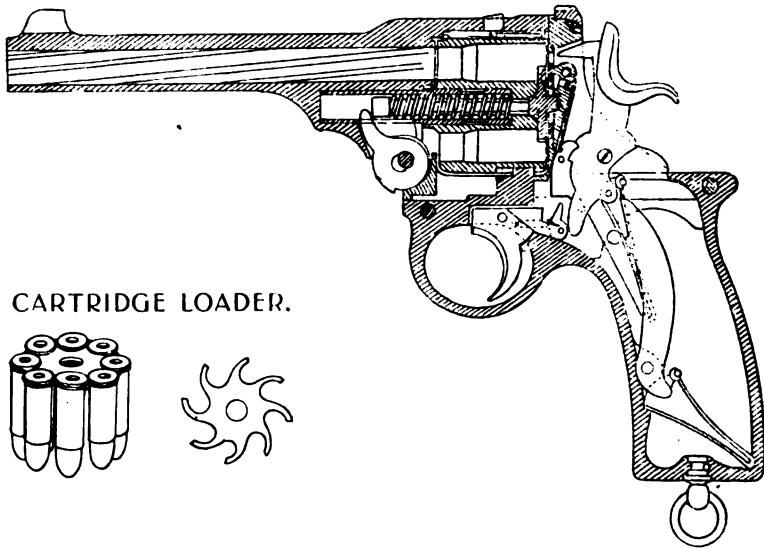
While on duty at the St. Louis Exposition, I came across Webley & Scott's exhibit, and I believe, as do many other officers who have seen the revolver, that they have the weapon for our service.

Webley has for many years made revolvers for the British Colonial service, and we all know the excellence of the W. & C. Scott & Sons guns. These two firms have consolidated, and their manufactures have carried off the highest awards, and their name guarantees a first-class article.

The revolver in question is so simple and readily understood that it seems hardly necessary to give more than a short description of its general points and workings.

The weapon is the outcome of a long series of experiments directed to secure a combination of some of the ad-

SECTION OF REVOLVER AT HALF COCK



vantages of automatic pistols with the qualities possessed by the ordinary service revolver. In any double-action revolver the cylinder's rotating and the hammer's rising by the pull on the trigger secure a mechanical rapidity of fire, whereas in the Webley-Fosbery those actions are performed automatically through the instrumentality of recoil. The recoil of the shot does not open the breech; it merely does the cocking, revolves the cylinder one-half a division, or one-half the revolution necessary to bring a fresh cartridge under the hammer, and compresses a spring which in its reaction revolves the cylinder the other necessary half divi-

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It is the intention to correct this list with every issue. If any errors are noted it will be conferring a favor if you will call attention to them.

The Association is anxious to increase its membership and in its efforts to do this all the members can give their assistance. If you know of any prospective members or subscribers, or any person who might be interested in the JOURNAL, the Council will be glad to have the address so that a copy of the JOURNAL may be mailed.

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 Bomus, P. S., lt. col. 6 cav., Ft. Keogh, Mont.
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 Boughton, D. H., maj. 11 cav., Ft. Leavenworth.
 Bowdish, Myron B., 2 lt. 10 cav., Ft. Washakie.
 Bowen, W. H. C., lt. col. 13 inf., Main & Seneca
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 City.
 Brambila, R. M., lt. 14 inf., Manila, P. I.
 Breck, Samuel, brig. gen. ret., 50 St. Stephen
 st., Boston, Mass.
 Brees, H. J., 1 lt. sig. corps, Ft. Leavenworth.
 Brett, Lloyd M., capt. 7 cav., 1340 31st st. Wash-
 ington, D. C.
 Briand, C., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Bristol, Matt C., 2 lt. 13 cav., Manila, P. I.
 Brooks, E. C., capt. 11 cav., Ft. Des Moines, Ia.
 Brown, L. T., lt. col., 33d & Smallwood sts.,
 Pittsburg, Pa.
 Brown, L. G., 2 lt. 12 cav., Manila.
 Brown, Oscar J., capt. 1 cav., Ft. Sam Houston,
 Texas.
 Brown, R. A., capt. 4 cav., Presidio, S. F., Cal.
 Brown, William C., maj. 3 cav., Ft. Assinui-
 boine, Mont.
 Bryan, R. B., capt. 5 cav., Ft. Grant, Ariz.
 Bryant, W. A., capt. Montclair, N. J.
 Buchanan, E. A., 2 lt. 9 cav., Ft. Riley, Kan.
 Buchan, F. E., 1 lt. 3 cav., Fort Leavenworth.
 Bull, Henry T., 2 lt. 13 cav., Manila, P. I.
 Burkhardt, S., jr., capt. 19 inf., Vancouver
 Bks., Wash.
 Burnett, Chas., 2 lt. 15 cav., Ft. Myer, Va.
 Burnett, George R., 1 lt. ret., Iowa City, Ia.
 Burroughs, James M., 1 lt. 12 cav., Manila, P. I.
 Bush, F. N., lt., Peoria, Ill.
 Butler, James S., 1 lt. sig. corps, Manila, P. I.
 Butler, Matt C., jr., capt. 7 cav., Camp Thomas.
 Butler, Rodman, 2 lt. 6 cav., Ft. Keogh, Mont.
 Byram, Geo. L., capt. 6 cav., Ft. Meade, S. Dak.
 Cabanis, A. A., capt. 24 inf., Ft. Missoula.
 Cable, Wm. A., lt. 103 W 55th st., New York.
 Cabell, Dr. Rosey C., capt. 1 cav., Ft. Clark, Tex.
 Caldwell, R. C., 1 lt. 7 cav., Camp Thomas, Ga.

- Calvert, E., 1 lt. 9 cav., Ft. Leavenworth.
 Cameron, Geo. H., capt. 4 cav., Ft. Riley.
 Camp, Beauford R., 2 lt. 9 cav., Denver.
 Card, C. S., lt. 1139 Clarkson st., Denver, Col.
 Carlton, C. H., brig. gen. ret., Met. Club, Wash-
 ington.
 Carpenter, E., capt. art. Ft. Totten, N. Y.
 Carpenter, L. H., brig. gen. ret., Philadelphia.
 Carr, Camillo C. C., brig. gen., St. Paul, Minn.
 Carr, Eugene A., brig. gen. ret., Washington,
 D. C.
 Carroll, Henry, brig. gen. ret., Lawrence, Kan.
 Carson, John M., jr., maj. Q. M. D., West Point.
 Carson, L. S., 1 lt. 8 cav., Ft. Sill, Okla.
 Carson, T. G., capt. 10 cav., Ft. Washakie, Wyo.
 Carter, Wm. H., brig. gen., Manila, P. I.
 Cartmell, N. M., 1 lt. 10 cav., Ft. Robinson, Neb.
 Case, Frank L., 1 lt. 12 cav., Manila, P. I.
 Cassidy, H. C., capt., 2205 Calumet ave., Chicago.
 Casteele, D. T. E., 1 lt. 7 cav., Camp Thomas, Ga.
 Cathro, Thos. E., 2 lt. 13 cav., 1121 N. West st.,
 Indianapolis, Ind.
 Cavanaugh, H. La T., capt. 10 cav., Ft. Robin-
 son, Neb.
 Chaffee, Adna R., lt. gen., Washington, D. C.
 Chapman, G. L., lt. 25 inf., Ft. Reno, Okla.
 Chapman, L. A. I., 1 lt. 1 cav., Ft. Leavenworth.
 Chase, Geo. F., lt. col. 12 cav., Manila, P. I.
 Chase, John, brig. gen., Denver, Col.
 Cheever, B. H., maj. 6 cav., Ft. Meade, S. D.
 Chitty, Wm. D., capt. 4 cav., Columbia, Mo.
 Churchill, C. Robert, capt., 407 Morris Bldg.,
 New Orleans.
 Clark, Chas. H., maj. O. D., Springfield, Mass.
 Clark, H. B., lt. art. corps, Ft. Leavenworth.
 Clark, Will H., 913 Marquette Bldg., Chicago.
 Clark, Wm. F., capt. 2 cav., Manila, P. I.
 Clayton, P., jr., capt. 11 cav., Ft. Des Moines.
 Cleveland, J. Wray, 146 Broadway, N. Y.
 Clopton, Wm. H., jr., 1 lt. 13 cav., Manila, P. I.
 Cocke, J., 2 lt. 11 cav., Ft. Des Moines, Ia.
 Coffey, Edgar N., 1 lt. 2 cav., Manila, P. I.
 Cole, C. W., 1 lt. 9 cav., Ft. Leavenworth.
 Cole, Geo. M., gen., Hartford, Conn.
 Cole, James A., capt. 6 cav., Ft. Meade, S. Dak.
 Coleman, S., 1 lt. 9 cav., Ft. Leavenworth.
 Collins, R. L., 2 lt. 2 cav., Manila, P. I.
 Collins, Thos. D., maj., Gainesville, Tex.
 Comly, George B., 1 lt. 3 cav., West Point.
 Conklyn, John, jr., capt. art., Ft. Ethan Allen.
 Connell, W. M., 1 lt. 7 cav., Camp Thomas, Ga.
 Conrad, C. H., capt. 3 cav., St. Louis Exposition.
 Courad, Julius T., capt. 3 cav., Chester, Pa.
 Converse, G. L., capt. ret., 23 E. State st.,
 Columbus, Ohio.
 Cooley, W. M., 2 lt. 5 cav., Ft. Wingate, N. M.
 Cooper, C. L., brig. gen. ret., State Capitol,
 Denver, Col.
 Cootes, Harry N., 1 lt. 12 cav., Manila, P. I.
 Coppock, E. R., 2 lt. 3 cav., Ft. Apache, Ariz.
 Corcoran, Thos. M., capt. 13 cav., Manila, P. I.
 Cornell, W. A., 1 lt. 10 cav., Ft. Robinson, Neb.
 Cornish, L. W., capt. 9 cav., Jefferson Bks., Mo.
 Coughlan, T. M., 1 lt. 2 cav., Manila, P. I.
 Counselman, W., capt., 335 Rush st., Chicago.
 Cowell, T. R., capt., Parkersburg, W. Va.
 Cowin, W. B., 1 lt. 3 cav., Ft. Assiniboine.
 Cowles, W. H., 2 lt. 4 cav., Ft. Walla Walla.
 Cox, Edwin L., 2 lt. 9 cav., Jefferson Bks., Mo.
 Cox, A. B., 1 lt. 8 cav., Jefferson Bks., Mo.
 Craig, H., jr., 1917 Chestnut st., Philadelphia.
 Craig, J. W., capt. 12 cav., Manila, P. I.
 Craig, M., capt. 10 cav., Ft. Leavenworth.
 Craighill, Wm. E., capt. eng., 166 Gov. st.,
 Mobile, Ala.
 Craigie, D. J., brig. gen. ret., Rochambeau,
 Washington, D. C.
 Craue, Chas. J., lt. col. 8 inf., San Juan, P. R.
 Craycroft, Wm. T., 1 lt. ret., Dallas, Texas.
 Cress, Geo. O., capt. 4 cav., Orchard Lake, Mich.
 Crimmins, M. L., 1 lt. 19 inf., Ft. Leavenworth.
 Croft, E., capt. 2 inf., Ft. Logan, Col.
 Crosby, Herbert B., capt. 14 cav., Manila, P. I.
 Crowder, E. H., col. j. a., Washington, D. C.
 Crozier, Wm., brig. gen., Washington, D. C.
 Cruse, Thos., maj. Q. M. dept., St. Louis.
 Cullen, D., 1 lt. 3 cav., Ft. Assiniboine, Mont.
 Culver, C. C., 1 lt. 3 cav., Ft. Assiniboine, Mont.
 Cunningham, T. H., 2 lt. 8 cav., Jefferson Bks.
 Curry, W. L., capt., Columbus, O.
 Cusack, Joseph E., capt. 12 cav., Manila, P. I.
 Dade, A. L., capt. 13 cav., Manila, P. I.
 Dallah, S. F., capt. 5 cav., Ft. Huachuca, Ariz.
 Dalton, H. F., 1 lt. 6 inf., Ft. Leavenworth.
 Danforth, C. H., 1 lt. 17 inf., Manila, P. I.
 Davidson, A. H., 1 lt. 18 cav., Manila, P. I.
 Davis, B. O., 2 lt. 10 cav., Ft. Washakie, Wyo.
 Davis, C. O., capt., Corsicana, Tex.
 Davis, E., 1 lt. 11 cav., Ft. Des Moines, Iowa.
 Davis, F. E., 2 lt. 8 cav., Jefferson Bks., Mo.
 Davis, G. B., brig. gen., Washington, D. C.
 Davis, Ira D., capt., Houston, Tex.
 Davis, M. F., capt. 1 cav., Ft. Leavenworth.
 Davis, Norman H., 2 lt. 14 cav., Manila, P. I.
 Davis, T. F., lt. col. 30 inf., Ft. Logan H. Roots,
 Ark.
 Davis, W., bri. gen. ret., The Albion, Balti-
 more, Md.
 Day, Clarence R., capt. 5 cav., Macon, Mo.
 Dean, W., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Degen, J. A., 1 lt. 12 cav., Manila, P. I.
 DeLtrick, L. L., 1 lt. 13 cav., Manila, P. I.
 Dickman, J. T., capt. 8 cav., War Dept., Wash-
 ington, D. C.
 Disque, B. P., 1 lt. 3 cav., Ft. Leavenworth.
 Dixon, V. D., 1 lt. 5 cav., Ft. Wingate, N. Mex.
 Dockery, A. B., lt. 5 cav., Ft. Wingate, N. M.
 Dodd, G. A., lt. col. 10 cav., 1316 Filbert st.,
 Philadelphia.
 Dodge, C. C., gen., 10 E 76 St., New York.
 Dodge, Francis S., brig. gen., Washington, D. C.
 Dodge, T. A., lt. col. ret., Room 517, 253
 Broadway, New York City.
 Dolan, T. J., capt., 2021 Walnut st., Philadelphia.
 Donaldson, T. Q., capt. 8 cav., Ft. Sill, O. T.
 Donovan, A. E., vetn. art., Vancouver Bks.
 Dorcy, B. H., 1 lt. 4 cav., Presidio, Monterey, Cal.
 Dorst, J. H., lt. col. 3 cav., Ft. Assiniboine.
 Dougherty, C. A., 2 lt. 13 cav., Manila, P. I.
 Drake, C. B., capt. 14 cav., Manila, P. I.
 Dudley, Clark D., 1 lt. 14 cav., Manila, P. I.
 Duff, Robt. J., capt. 8 cav., Ft. Riley.
 Ducher, H. M., vetn., Peekskill, N. Y.
 Duvall, W. P., maj. art., Washington, D. C.
 Dyer, Ed. H., maj., Burlington, Vt.
 Early, Orson L., 2 lt. 8 cav., Ft. Riley.
 Eaton, W. R., lt. box 952, Denver, Col.
 Edgerly, Winfield S., col. 2 cav., Manila, P. I.
 Edmunds, C. W., lt., 425 Walnut st., Philadel-
 phia.
 Edwards, Frank A., maj. 4 cav., Rome, Italy.
 Edwards, Frank B., 1 lt. art., Ft. Hamilton.
 Edwards, Frank B., 1 lt. 4 cav., St. Paul, Minn.
 Edwards, W. W., 2 lt. 10 cav., Ft. Robinson, Neb.
 Elliott, S. H., capt. 11 cav., Ft. Des Moines, Ia.
 Ellis, R. B., 1 lt. 14 cav., Manila.
 Eltinge, LeRoy, capt. 15 cav., Ft. Ethan Allen.
 Ely, E. J., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Ely, H. E., capt. 26 inf., Ft. Leavenworth.
 Engel, E., 2 lt. 9 cav., Ft. Leavenworth, Kan.
 English, E. G., 2 lt. 5 cav., Ft. Apache, Ariz.
 Enos, Copley, 2 lt. 1 cav., Ft. Sam Houston,
 Texas.
 Enslow, R. S., lt. 10 cav., Ft. Washakie, Wyo.
 Erwin, J. B., maj. 9 cav., Ft. Leavenworth.
 Estes, Geo. H., jr., capt. 20 inf., Manila, P. I.
 Esty, Thos. B., 2 lt. 9 cav., Jefferson Bks.
 Eustes, H. L., lt., 1410 Jackson ave., New Or-
 leans, La.
 Evans, E. W., capt. 8 cav., Jefferson Bks., Mo.
 Evans, Geo. H., capt. ret., 226 Ophelia st., Pitts-
 burg, Pa.
 Fair, John S., 1 lt. 9 cav., Ft. Leavenworth.
 Farber, Chas. W., capt. 8 cav., 513 Broadway,
 Albany, N. Y.
 Farmer, Chas. C., jr., 1 lt. 10 cav., Ft. Leaven-
 worth.
 Farnsworth, Chas. S., capt. 7 inf., Manila, P. I.

- Farnum, F. H., 2 lt. 11 inf., Ft. D. A. Russell.
 Faulkner, A. U., 1 lt. art., Ft. Du Pont, Del.
 Fecht, Jas. E., 1 lt. 9 cav., Jefferson Bks.
 Fenton, C. W., capt. paym (cav.), Manila.
 Fisher, Ronald E., 2 lt. 14 cav., Manila.
 Fitch, Roger S., 1 lt. 1 cav., Ft. Leavenworth.
 Fleming, L. J., capt. Q. M., San Antonio, Tex.
 Fleming, K. J., capt. 10 cav., Ft. Robinson.
 Foerster, L., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Foltz, Fred S., capt. 5 cav., Manila, P. I.
 Fonda, Ferd. W., 1 lt. 10 cav., Ft. Mackenzie.
 Foote, S. M., capt. art., Ft. Myer, Va.
 Forbush, W. C., col. ret., The Markeen, 1291
 Main St., Buffalo, N. Y.
 Foreman, Milton J., maj., 3412 Vernon Ave.,
 Chicago.
 Forsyth, Jas. W., maj. gen. ret., Columbus, O.
 Forsyth, Wm. W., capt. 6 cav., Ft. Keogh, Mont.
 Fortescue, G. R., 1 lt. 10 cav., Washington.
 Foster, A. B., capt. 19 inf., Vancouver Bks.
 Foster, Fred W., maj. 5 cav., Whipple Bks. Ariz.
 Foster, Leo F., capt. art., Ft. Fremont, S. C.
 Fountain, S. W., lt. col. 4 cav., World's Fair
 Station, St. Louis, Mo.
 Foy, Robert C., 1 lt. 1 cav., West Point, N. Y.
 Frazer, Walter, vet. 13 cav., Manila, P. I.
 Freeman, H. B., brig. gen. ret., Leavenworth.
 Fuller, C. J., capt., Salinas, Cal.
 Fuller, A. M., capt. 9 cav., 405½ W. Depot st.,
 Knoxville, Tenn.
 Fuller, Ezra B., maj., ret., Columbia, S. C.
 Funston, Fred, brig. gen., Chicago, Ill.
 Furlong, J. W., capt. 6 cav., Ft. Meade, S. D.
 Galbraith, J. G., maj. 1 cav., Des Moines, Ia.
 Gale, George H. G., maj. i. g. d., Star Building,
 St. Louis.
 Gardenhire, W. C., 2 lt. 15 cav., Ft. Ethan
 Allen.
 Gardner, Edwin F., lt. col. ret., Holliston, Mass.
 Gardner, John H., capt. 2 cav., Manila, P. I.
 Garly, George, 1 lt. 2 cav., Gen. Hospital, Pre-
 sidio, San Francisco.
 Garrard, Joseph, lt. col. 14 cav., Manila, P. I.
 Gaston, Joseph A., maj. 1 cav., Ft. Sam Hous-
 ton, Texas.
 Gatley, Geo. G., capt. art., Manila, P. I.
 Gaujot, Julien E., 1 lt. 11 cav., Ft. Des Moines
 Iowa.
 Gibbins, H., 1 lt. 9 cav., Ft. Leavenworth.
 Gillem, Alvan C., 1 lt. 4 cav., Presidio S. F., Cal.
 Glasgow, Wm. J., capt. 13 cav., Governor's Is-
 land, N. Y.
 Gleaves, S. K., 1 lt. 1 cav., Ft. Clark, Tex.
 Godfrey, E. S., col. 9 cav., Ft. Riley, Kan.
 Godson, W. F. H., 1 lt. 10 cav., Ft. Robinson.
 Godwin, E. A., lt. col. 9 cav., Jefferson Bks.
 Going, R. B., 1 lt. 15 cav., Ft. Ethan Allen.
 Goldman, H. J., capt. 5 cav., Ft. Apache, Ariz.
 Goodale, Geo. S., capt. 23 inf., Manila.
 Goode, George W., capt. 1 cav., Ft. Clark, Tex.
 Godin, J. A., capt. 7 inf., Manila, P. I.
 Goodspeed, Nelson A., 2 lt. 3 cav., Ft. Assin-
 boine, Mont.
 Gordon, Geo. A., col. Savannah, Ga.
 Gordon, Wm. W., 2 lt. 2 cav., Manila, P. I.
 Gould, J. H., vetn. 11 cav., Ft. Riley, Kas.
 Graham, Alden M., 2 lt. 1 cav., Ft. Clark, Tex.
 Granger, R. S., 1 lt. art., Ft. Riley.
 Grant, Frederick D., brig. gen., Governor's Is-
 land, New York.
 Grant, Walter S., 1 lt. 3 cav., St. Paul, Minn.
 Gray, Alonzo, capt. 14 cav., Manila, P. I.
 Greely, Adolphus W., brig. gen., Washington,
 D. C.
 Gresham, John C., maj. 15 cav., Ft. Ethan Al-
 len, Vt.
 Grierson, B. H., brig. gen. ret., Jacksonville,
 Ill.
 Grierson, C. H., capt. 10 cav., Ft. Robinson.
 Griffith, F. D., jr., 2 lt. 6 cav., Ft. Meade, S. Dak.
 Griggs, Everett G., capt., Tacoma, Wash.
 Groome, J. C., capt., 1222 Walnut st., Phila-
 delphia, Pa.
 Gross, F. W., col., 142 Logan ave., Denver, Col.
 Grout, Paul, 2 lt., 233 Pacific st., Brooklyn,
 N. Y.
 Grove, W. R., capt. sub. dept., Kansas City.
 Grunert, G. S., 1 lt. 11 cav., Ft. Des Moines.
 Grutzman, W. K., vetn. 15 cav., Ft. Ethan Al-
 len, Vt.
 Guest, John, capt. ret., 1620 19th st. N. W.,
 Washington, D. C.
 Guilfoyle, J. F., maj. mil. sec. dept., Manila.
 Haight, C. S., 1 lt. 4 cav., Ft. Leavenworth.
 Haldeman, Horace L., lt. col., Real Estate
 Bldg., Philadelphia, Pa.
 Hall, C. G., capt. 5 cav., Whiterocks, Utah.
 Hall, W. P., brig. gen., Washington, D. C.
 Hammond, Andrew G., maj. 3 cav., World's
 Fair Station, St. Louis.
 Hammond, C. L., 4627 Greenwood ave., Chicago.
 Hanna, M. E., capt. 3 cav., Ft. Assiniboine,
 Mont.
 Harbord, James G., col. Phil. Constab, Ma-
 nila, P. I.
 Hardean, L., capt. 11 cav., Ft. Des Moines, Ia.
 Hardie, Francis H., maj. 14 cav., Manila, P. I.
 Hardin, E. E., maj. 7 inf., Manila, P. I.
 Harper, Roy B., capt. 3 cav., Ft. Assiniboine,
 Mont.
 Harris, E. R., 2 lt. 11 cav., Ft. Des Moines, Ia.
 Harris, F. W., capt. 4 cav., Vienna, Austria.
 Harris, Moses, maj. ret., Life bldg., N. Y. City.
 Harrison, Ralph, capt. c. s. (cav.), Manila, P. I.
 Hart, A. C., 1 lt. 10 cav., Ft. Robinson, Nebr.
 Hartman, J. D. L., capt. 1 cav., Ft. Leaven-
 worth.
 Harvey, Charles G., 1 lt. 2 cav., Manila, P. I.
 Hasson, John P., 1 lt. 6 cav., Ft. Meade, S. D.
 Hathaway, C. E., 2 lt. 9 cav., Ft. Riley, Kan.
 Hawkins, Clyde E., capt. 2 cav., Manila, P. I.
 Hawkins, H. S., capt. sub. dept., Denver, Colo.
 Hay, W. H., capt. 10 cav., Ft. Robinson, Nebr.
 Hayden, John L., capt. art., Presidio, San
 Francisco.
 Hayden, Ralph N., 2 lt. 7 cav., Camp Thomas.
 Hayne, Paul T., jr., 1 lt. 14 cav., Manila, P. I.
 Hazzard, Oliver P. M., 1 lt. 2 cav., Manila, P. I.
 Hazzard, Russell T., 1 lt. 1 cav., Ft. Clark, Tex.
 Heard, J. W., capt. 3 cav., Ft. Assiniboine.
 Heaton, Wilson G., 1 lt. 13 cav., Manila, P. I.
 Hedekin, C. A., capt. 3 cav., Ft. Apache, Ariz.
 Heiberg, E. R., capt. 6 cav., Ft. Meade, S. Dak.
 Heidt, Grayson V., 1 lt. 14 cav., Manila, P. I.
 Hein, O. L., lt. col. ret., 2137 R st. N. W., Wash-
 ington, D. C.
 Heintzman, S., 1 lt. 6 cav., Ft. Leavenworth.
 Hemphill, J. E., 1 lt. sig. corps, Nome, Alaska.
 Hennessey, P. J., 2 lt. 6 cav., Ft. Huachuca.
 Henry, Guy V., capt. 12 cav., Manila, P. I.
 Henry, J. B., jr., 2 lt. 4 cav., Presidio, S. F., Cal.
 Herman, Fred J., 1 lt. 9 cav., Ft. Riley, Kan.
 Hero, W. S., lt., 622 Commercial Place, New
 Orleans, La.
 Herron, Joseph S., capt. 2 cav., Manila, P. I.
 Hershler, F. W., 1 lt. 4 cav., Presidio, S. F., Cal.
 Hickey, J. B., maj. 11 cav., 2d 3d ave., N. Y.
 Hickman, E. A., 1 lt. 1 cav., Ft. Sam Houston,
 Tex.
 Hickok, H. R., capt. 15 cav., Ft. Ethan Allen.
 Hilgard, M. K., 1 lt. 16 inf., Ft. McPherson, Ga.
 Hill, Wm. P., vetn. 12 cav., Manila, P. I.
 Hill, Zeph T., maj., Denver, Col.
 Hirsch, Harry J., capt. 20 inf., Manila, P. I.
 Hodges, H. L., 2 lt. 1 cav., Ft. Clark, Texas.
 Hodgson, F. J., maj. Q. M. D., Vancouver Bks.
 Hoff, J. V. R., lt. col. M. D., Ft. Leavenworth.
 Holabird, S. B., brig. gen. ret., 1311 P st. N. W.,
 Washington.
 Holbrook, L. R., capt. 5 cav., Ft. Leavenworth.
 Holbrook, W. A., capt. 5 cav., Whipple Bks.
 Holcomb, Freeborn P., lt. 14 cav., Manila, P. I.
 Holliday, Milton G., 2 lt. 15 cav., Ft. Ethan Al-
 len.
 Hoop, F. W., lt., Broad and Front sts., Red
 Bank, N. J.
 Hopkins, A. T., lt., Watertown, S. D.
 Hoppin, C. B., maj. 15 cav., Ft. Ethan Allen, Vt.

- Hornbrook, J. J., capt. 12 cav., Manila, P. I.
 Horton, W. E., capt. Q. M. D., Manila, P. I.
 Howard, H. P., capt. 14 cav., Manila, P. I.
 Howard, J. H., 2 lt. 9 cav., Jeffersons Bks.
 Howell, J. R., col., Bohemian Club, San Francisco.
 Howze, R. L., capt. 6 cav., World's Fair Station, St. Louis.
 Hoyle, George S., maj. ret., care Amer. Book Co., Atlanta, Ga.
 Huggins, E. L., brig. gen. ret., Muskogee, I. T.
 Hughes, J. B., capt. 4 cav., Presidio, Monterey.
 Hughes, Martin B., col. 1 cav., Ft. Clark, Tex.
 Hume, John K., 2 lt. 14 cav., Maulla, P. I.
 Hunsaker, I. L., 2 lt. 3 cav., Ft. Apache, Ariz.
 Hunt, Levi P., maj. 13 cav., Washington.
 Hunter, G. K., maj. 6 cav., Ft. Meade, S. Dak.
 Hunt, Geo. G., col. ret., Carlisle, Pa.
 Huston, James, 1 lt. 10 cav., Ft. Washakie, Wyo.
 Hyde, A. P. S., 1 lt. art., Ft. Terry, N. Y.
 Hyer, B. B., capt. 13 cav., Manila, P. I.
 Ingerton, W. H., capt., Amarillo, Tex.
 Irons, J. A., maj. iusp. gen., Star Bldg., St. Louis, Mo.
 Jackson, Henry, brig. gen. ret., Leavenworth.
 Jackson, R. F., 1 lt. 3 cav., Washington Bks.
 Jacobs, Douglas H., 2 lt. 14 cav., Maulla, P. I.
 Jeffers, S. L., 1 lt. re. 522 Scott, Little Rock, Ark.
 Jenkins, J. M., capt. 5 cav., Ft. Huachuca, Ariz.
 Jennings, T. H., 2 lt. 7 cav., Ft. Myer, Va.
 Jervey, E. P., jr., capt. 10 cav., Oklahoma City.
 Jewell, Chas. H., vetn. 13 cav., Manila, P. I.
 Jewell, James M., 2 lt. 14 cav., Manila, P. I.
 Johnson, A., capt. 13 inf., Alcatraz Island, Cal.
 Johnson, C. P., capt. 10 cav., Ft. Robinson, Neb.
 Johnson, F. O., maj. 2 cav., Manila P. I.
 Johnson, F. C., 1 lt. 2 cav., Manila, P. I.
 Johnson, H. B., 2 lt. 3 cav., Ft. Assiniboine.
 Johnson, G., 1 lt. sig. corps, Manila, P. I.
 Johnston, J. A., gen., 2111 Mass. ave., Washington, D. C.
 Johnston, W. T., capt. 15 cav., Ft. Ethan Allen.
 Jones, C. R., 273 S. Fourth st., Philadelphia.
 Jones, F. M., 1 lt. 9 cav., Ft. Riley, Kan.
 Jones, S. G., capt. 11 cav., Ft. Des Moines, Ia.
 Jordan, H. B., 1 lt. O. D., Frankford, Pa.
 Joyce, K. A., 2 lt. 6 cav., Ft. Leavenworth.
 Jurich, A., jr., 2 lt. 4 cav., Presidio, Monterey.
 Karnes, Wm. L., 1 lt. 6 cav., Omaha, Neb.
 Keller, Frank, 2 lt. 8 cav., Jeffersons Bks. Mo.
 Kelly, Wm., capt. eng., Ft. Leavenworth.
 Kelly, W., jr., capt. 9 cav., West Point, N. Y.
 Kelly, William H., capt., 140 Glenway st., Dorchester, Mass.
 Kendall, Henry F., maj. 12 cav., 1164 Thurman st., Portland, Ore.
 Kendall, Henry M., maj. ret., Soldiers' Home, Washington.
 Kenuedy, W. B., maj. ret., 667 Carondelet st., Los Angeles, Cal.
 Kennington, Alfred E., capt. 7 cav., Camp Thomas, Ga.
 Kerr, James T., lt. col. mil. sec. dept., Washington.
 Kerr, J. B., col. 12 cav., Lexington, Ky.
 Kerth, Monroe C., capt. 23 inf., Manila, P. I.
 Ketcheson, J. C., Leavenworth, Kan.
 Keyes, Allen C., 2 lt. 14 cav., Manila, P. I.
 Keyes, E. A., 2 lt. 6 cav., 1970 3d st., San Diego, Cal.
 Kilbourne, Louis H., 2 lt. 8 cav., Ft. Sill, Okla.
 Kilian, Julius N., capt. sub. dept., 3d and Olive, St. Louis.
 Kimball, Gordon N., 1 lt. 12 cav., Ogden, Utah.
 King, Albert A., 1 lt. 8 cav., Ft. Sill, Okla.
 King, Charles, brig. gen., P. O. box 735, Milwaukee, Wis.
 King, Ed L., capt. 2 cav., Colon, Panama.
 Kirkman, Hugh, 1 lt. 8 cav., Ft. Sill, Okla.
 Kirkpatrick, George W., capt. 15 cav., Ft. Ethan Allen, Vt.
 Kline, J. brig. gen. ret., The Angus, St. Paul, Minn.
 Knight, J. T., maj. qm. dept., Philadelphia.
 Knox, R. S., 1 lt. 24 inf., Ft. Missoula, Mont.
 Knox, Thomas M., 1 lt. 4 cav., Ft. Walla Walla.
 Knox, T. T., col. ret., N. Y. Life Bldg., New York City.
 Koch, Stanley, 2 lt. 5 cav., Ft. Huachuca, Ariz.
 Kochersperger, S. M., capt. 2 cav., Manila, P. I.
 Koehler, L. M., capt. 4 cav., Presidio, S. F., Cal.
 Koester, F. J., capt. 15 cav., Ft. Ethan Allen.
 Kramer, J. L., maj., Parkersburg, W. Va.
 Kromer, L. B., 1 lt. 11 cav., West Point, N. Y.
 Krumm, Herbert Z., 2 lt. 1 cav., Ft. Clark, Tex.
 Lacey, F. E., jr., capt. 1 inf., Ft. Wayne, Mich.
 Lahm, F. P., 2 lt. 6 cav., West Point.
 Lake, B. M., capt., Alcutt P. O., Denver.
 Landis, J. F. R., capt. 1 cav., Ft. Clark, Tex.
 Langdon, J. G., 1st lt. a. t., Ft. Miley, Cal.
 Langhorne, G. T., capt. 11 cav., Manila, P. I.
 Lanza, C. H., capt. art. corps, Birmingham, Ala.
 Leach, S. S., lt. col. eng., 27-8 Penn. ave., Washington.
 Lear, B., jr., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Leary, E. M., capt. 11 cav., Ft. Riley, Kan.
 Lebo, Thos. C., col. 14 cav., Presidio, S. F., Cal.
 Lechtman, C., col., Kansas City, Mo.
 Lee, Fitzbugh, brig. gen. ret., Norfolk, Va.
 Lee, Fitzbugh, jr., 1 lt. 12 cav., Manila, P. I.
 Lee, Geo. M., 1 lt. 7 cav., Ft. Riley, Kan.
 Lee, J. M., brig. gen., San Antonio, Tex.
 Leasher, R. W., 2 lt. 3 cav., care mil. sec., Washington.
 Lewis, C. R., lt. 23 inf., Manila.
 Lewis, J. H., 1 lt. 5 cav., Ft. Wingate, N. M.
 Lewis, LeRoy D., 2 lt. 4 cav., Ft. Walla Walla.
 Lewis, T. J., capt. 2 cav., 514 W. Jefferson st., Louisville, Ky.
 Lincoln, James R., brig. gen., Ames, Iowa.
 Lindsey, J. R., capt. 15 cav., Ft. Ethau Allen.
 Linsley, Elmer, capt. 1 cav., Ft. Clark, Tex.
 Linsinger, Clarence, 2 lt. 1 cav., Ft. Clark, Tex.
 Lippincott, Aubrey, 1 lt. 14th cav., Manila, P. I.
 Littebrant, W. T., capt. 12 cav., Manila, P. I.
 Liverman, H. T., capt., Mansfield, La.
 Livermore, R. L., capt. 10 cav., Ft. Bayard, N. M.
 Lochridge, P. D., capt. 13 cav., Manila, P. I.
 Lockett, James, maj. 4 cav., Presidio, Monterey.
 Lockwood, J. A., capt. ret., 530 5th ave., N. Y.
 Logan, A. J., col., 119 3d ave., Pittsburg, Pa.
 Lomax, L. C., lt., Telluride, Col.
 Long, John D., 1 lt. 12 cav., Manila, P. I.
 Longstreet, Jas., jr., 1 lt. 13 cav., Manila, P. I.
 Lott, Abraham G., capt. 6 cav., Ft. Meade, S. D.
 Loud, John S., lt. col. ret., 3209 13 st. N. W., Washington, D. C.
 Love, Moss L., 2 lt. 2 cav., Manila, P. I.
 Love, Robt. R., 2 lt. 9 cav., Ft. Riley, Kan.
 Lovell, Geo. E., 1 lt. 7 cav., Camp Thomas, Ga.
 Lowe, A. W., maj., 1 Olive st., Lynn, Mass.
 Lowe, Wil-on, maj., Upper Alton, Ill.
 Lowe, Wm. L., 1 lt. 13 cav., Manila, P. I.
 Ludington, M. I., maj. gen. ret., Skaneateles, Onondaga Co., New York.
 Luedeka, E. C., lt., 245 Seminary ave., Chicago.
 Luhn, Wm. L., 1 lt. 11 cav., Ft. Riley, Kan.
 Lull, C. T. E., lt. art., Ft. Worden, Wash.
 Lusk, Wm. V., vetn. 2 cav., Manila, P. I.
 Lyon, C. A., col., Sherman, Texas.
 McAndrews, Jos. R., 1 lt. 1 cav., Ft. Sam Houston, Tex.
 MacArthur, Arthur, maj. gen., San Francisco.
 Macklin, J. E., lt. col. 3 inf., Ft. Liscum, Alaska.
 MacKinlay, W. E. W., 1 lt. 1 cav., Washington, D. C.
 MacLeod, Norman, lieut., North American Bldg., Philadelphia.
 McCabe, E. R. W., 2 lt. 6 cav., Ft. Keogh, Mont.
 McCain, Wm. A., 2 lt. 8 cav., Ft. Riley, Kan.
 McCarthy, D. E., maj. Q. M. D., Ft. Leavenworth.
 McCaskey, D., 1 lt. 4 cav., Presidio, S. F., Cal.
 McCaskey, Wm. S., brig. gen., Manila, P. I.
 McClernaud, E. J., maj. mil. sec. dept., St. Louis.
 McClintock, J., lt. 5 cav., Ft. Wingate, N. M.
 McClure, A. N., 1 lt. 5 cav., Ft. Duchesne Utah.
 McClure, N. F., capt. 5 cav., Ft. Huachuca, Ariz.

- McCord, J. H., lt. col., St. Joseph, Mo.
 McCormick, L. S., maj. 7 cav., Ft. Leavenworth.
 McCormack, W. H., capt. 9 cav., Ft. Riley, Kan.
 McCoy, Frank R., capt. 8 cav., Manila, P. I.
 McCrossin, E. J., 614 Nat. Bank Bldg., Birmingham, Ala.
 Macdonald, A., vetn. 11 cav., Ft. Des Moines, Ia.
 MacDonald, G. H., capt. 1 cav., West Point.
 McDonald, J. B., capt. 3 cav., Ft. Assiniboine.
 McEnhill, Frank, 2 lt. 2 cav., Manila, P. I.
 McFadden, J. F., lt., 121 Chestnut st., Philadelphia.
 McGee, Oscar A., 1 lt. 2 cav., Manila, P. I.
 McGonnigle, J. A., lt., Leavenworth, Kan.
 McKenney, Henry J., 1 lt. 14 cav., Manila, P. I.
 McKee, Will J., gen., Indianapolis.
 McKinley, James F., 1 lt. 14 cav., Manila, P. I.
 McLeer, J. C., lt., 475 Halsey st., Brooklyn.
 McMullen, J. I., 2 lt. 15 cav., Waynesville, N. C.
 McMurdo, C. D., vetn. 10 cav., Ft. Robinson.
 Macnab, A. M., 2 lt. Phil. Scouts, Manila, P. I.
 McNally, R. E., 1 lt. 3 cav., Ft. Yellowstone, Wyo.
 McNamee, M. M., capt. 15 cav., 1515 Larimer st., Denver.
 McNarney, F. T., 1 lt. 6 cav., Ft. Meade.
 Macomb, A. C., capt. 5 cav., Ft. Huachuca, Ariz.
 Macomb, M. M., maj. art. corps, Washington.
 Maize, Sidney D., 2 lt. 3 cav., Boise Bks, Idaho.
 Mangum, W. P., jr., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Mann, H. E., 2 lt. 7 cav., Camp Thomas, Ga.
 Marshall, F. C., capt. 15 cav., West Point, N. Y.
 Martin, I. S., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Martin, J. W., lt., 1709 Walnut st., Philadelphia.
 Martin, W. F., 1 lt. 2 cav., Manila, P. I.
 Mason, Chas. W., lt. col. 29 inf., Ft. Douglass, Utah.
 Matthias, W. W., Walden, N. Y.
 Maus, M. P., col. 20 inf., Manila, P. I.
 Mayo, Charles R., 2 lt. 12 cav., Manila, P. I.
 Meade, W. G., 2 lt. 11 cav., Ft. Riley, Kan.
 Mearns, Robert W., capt. 20 inf., Manila, P. I.
 Mears, Fred., 2 lt. 5 cav., Ft. Leavenworth.
 Megill, S. C., 2 lt. 8 cav., Jefferson Bks, Mo.
 Meltzer, C. F., lt., 1282 Wilcox ave., Chicago.
 Mercer, W. A., capt. 7 cav., Carlisle, Pa.
 Merritt, W., maj. gen. ret., 1622 R. L. ave. N. W., Washington, D. C.
 Metcalf, W. S., gen., Lawrence, Kan.
 Meyer, Oren B., capt. 14 cav., Manila, P. I.
 Michle, R. E. L., capt. 12 cav., War College, Washington.
 Miller, A. M., capt. 9 cav., Ft. Riley, Kan.
 Miller, Archie, 1 lt. 6 cav., Ft. Keogh, Mont.
 Miller, E. L., lt., 510 Madison ave., Albany.
 Miller, O., lt., 501 Russell ave., Cleveland, O.
 Miller, Troup, lt. 7 cav., Camp Thomas, Ga.
 Miller, Wm. H., lt. col., Q. M. dept., Chicago, Ill.
 Mills, Albert L., brig. gen., West Point, N. Y.
 Mills, A., brig. gen. ret., Washington, D. C.
 Mills, S. C., col. insp. gen. dept., Washington.
 Milton, A. M., 2 lt. 4 cav., Presidio, Monterey.
 Miner, C. W., brig. gen. ret., 70 Lexington ave., Columbus, Ohio.
 Mitchell, George E., capt. 13 cav., Manila, P. I.
 Mitchell, H. E., 2 lt. 3 cav., Boise Bks, Idaho.
 Moffet, Wm. P., 1 lt. 13 cav., Ft. Des Moines, Ia.
 Mohn, A. J., 2 lt. 4 cav., Jefferson Bks, Mo.
 Monohan, J. J., capt., West Chelmsford, Mass.
 Moore, Francis, brig. gen., San Francisco.
 Moore, J. A., lt. art. corps, 303 Bull st., Savannah, Ga.
 Morey, Lewis S., 1 lt. 12 cav., Manila, P. I.
 Morgan, G. H., maj. 9 cav., University of Minnesota, Minneapolis, Minn.
 Morgan, John M., capt. 12 cav., Manila, P. I.
 Morris, W. V., 1 lt. 6 cav., West Point, N. Y.
 Morrison, C. E., col. Parkersburg, W. Va.
 Morrison, G. L., 1 lt. 5 cav., Ft. Apache, Ariz.
 Morrow, H. M., maj. j. a., San Francisco, Cal.
 Morrow, J. J., capt. eng., Washington, D. C.
 Morton, C., col. 7 cav., Ft. Myer, Va.
 Morton, C. E., 1 lt. 16 inf., Ft. Leavenworth.
 Moseley, G. V. H., 1 lt. 1 cav., San Antonio, Tex.
 Moses, G. W., capt. pay dept., Kansas City, Mo.
 Mott, T. B., capt. art. corps, Paris, France.
 Mowry, P., 1 lt. 15 cav., Ft. Ethan Allen, Vt.
 Mueller, Albert H., 2 lt. 8 cav., Ft. Riley, Kan.
 Mueller, R. W., capt., Milwaukee, Wis.
 Müller, C. H., 2 lt. 10 cav., Ft. Robinson, Neb.
 Mumma, Morton C., 1 lt. 2 cav., Manila, P. I.
 Munro, H. N., 2 lt. 1 cav., Ft. Clark, Tex.
 Munro, J. N., capt. 3 cav., Lake City, Minn.
 Murphy, P. A., capt. 1 cav., Ft. Clark, Tex.
 Murphy, Will H., capt., Corsicana, Tex.
 Murray, C. H., maj. 4 cav., San Francisco, Cal.
 Myers, Hu B., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Nance, John T., capt. 9 cav., University of Cal., Berkeley, Cal.
 Naylor, C. J., 2 lt. 4 cav., Presidio, Monterey.
 Naylor, W. K., capt. 9 inf., Ft. Leavenworth.
 Nichols, Wm. A., maj. insp. gen'l dept., St. Louis, Mo.
 Nicholson, Wm. J., major 7 cavalry, Camp Thomas, Ga.
 Nissen, A. C., capt. 5 cav., Ft. Huachuca, Ariz.
 Noble, Robert H., capt. 3 inf., Manila, P. I.
 Nockolds, C., vetn. 1 cav., Ft. Sam Houston, Tex.
 Nolan, D. E., capt. 30 inf., Washington, D. C.
 Nolan, Robert M., 1 lt. 1 cav., A. & N. Hoop., Hot Springs, Ark.
 Norman, Wm. W., capt., 2 Punjab cav.
 Norton, Clifton R., 2 lt. 15 cav., Ft. Ethan Allen.
 Norvell, Guy S., 1 lt. 8 cav., Jefferson Bks, Mo.
 Norvell, S. T., lt. col. ret., Tallahassee, Fla.
 Notmeyer, Wm. C., lt. Piere, S. D.
 Noyes, Charles R., maj. 9 inf., Omaha, Neb.
 Noyes, Henry E., col. ret., 2913 Van Ness ave., San Francisco, Cal.
 Oakes, James, brig. gen. ret., The Portland, Washington.
 O'Connor, Charles M., maj. 14 cav., Manila, P. I.
 Odell A. S., 1 lt. 11 cav., Ft. Riley.
 Oden, G. J., 1 lt. 10 cav., Ft. Mackenzie, Wyo.
 Oflley, Edward M., 2 lt. 12 cav., Ft. Clark, Tex.
 Oliver, L. W., 1 lt. 8 cav., Ft. Riley, Kan.
 Oliver, Prince A., 2 lt. 5 cav., Ft. Apache, Ariz.
 Oliver, Robt. Shaw, asst. sec. of war, Washington, D. C.
 Olmstead, E., North Broad st., Elizabeth, N. J.
 Orton, Edward P., capt. 2 cav., Manila, P. I.
 O'Shea, John, capt. 4 cav., Jefferson Bks, Mo.
 Otis, Frank I., 1 lt. 4 cav., Presidio, S. F., Cal.
 Ott, Frederick M., capt., Harrisburg, Pa.
 Overton, W. W., 2 lt. 15 cav., Ft. Ethan Allen.
 Paddock, G. H., lt. col. 5 cav., 194 s Clark st., Chicago, Ill.
 Payan, W. E., capt., 80 Terrace, Buffalo, N. Y.
 Page, Charles, brig. gen. ret., 310 Dolphin st., Baltimore, Md.
 Paine, Wm. H., capt. 7 cav., Ft. Leavenworth.
 Palmer, B., 1 lt. 10 cav., Ft. Robinson, Neb.
 Palmer, H. W., lt., 2711 Prospect st., Tacoma.
 Parker, C., jr., lt., 765 Broad st., Newark, N. J.
 Parker, Dexter Wm., Meriden, Conn.
 Parker, F. Le J., capt. 12 cav., Ft. Leavenworth.
 Parker, James, lt. col. adj. gen'l's dept., Star bldg., St. Louis, Mo.
 Parker, J. S., capt. 10 cav., Ft. Mackenzie, Wyo.
 Parker, Samuel D., 50 State st., Boston, Mass.
 Parsons, L., capt. 8 cav., Fayetteville, Ark.
 Patterson, W. L., 1 lt. Porto Rico regt., Cayce.
 Pattison, H. H., capt. 3 cav., Ft. Assiniboine.
 Paxton, R. G., capt. 10 cav., Ft. Robinson, Neb.
 Pearson, D. C., lt. col. 7 cav., Camp Thomas, Ga.
 Pearson, S. B., 1 lt. 9 cav., Ft. Riley, Kan.
 Penn, Julius A., capt. 7 inf., Manila, P. I.
 Penfield, W. G., lt. ord. dept., Watertown Arsenal, Watertown, Mass.
 Perkins, A. S., 1 lt. 1 cav., Ft. Clark, Texas.
 Perkins, Chas. E., capt., Nogales, Arizona.
 Perrins, Wm. A., maj., box 7, Roxbury, Mass.
 Perry, Alex. W., capt. 1 cav., Ft. Des Moines.
 Perry, Oran, gen., Indianapolis.
 Pershing, J. J., capt. 15 cav., war col., Washington, D. C.
 Pershing, W. B., 1 lt. 4 cav., Ft. Walla Walla.

- Phillips, Frvin L., capt. 13 cav., Manila, P. I.
 Pilcher, W., 1 lt. 9 cav., Ft. Bayard, N. M.
 Pitcher, J., maj. 6 cav., Ft. Yellowstone, Wyo.
 Place, Olney, 2 lt. 6 cav., Ft. Meade, S. D.
 Plummer, E. H., maj. 3 inf., Ft. Egbert, Alaska.
 Poillon, Arthur, 1 lt. 14 cav., Manila, P. I.
 Pond, G. E., col. Q. M. dept., Washington, D. C.
 Poore, Benj. A., capt. 6 inf., Ft. Leavenworth.
 Pope, Francis H., capt. 14 cav., Manila, P. I.
 Pope, Wm. R., 2 lt. 2 cav., Manila, P. I.
 Power, E. L., capt., Lebanon, Ore.
 Powers, Robert B., capt. 7 cav., Camp Thomas.
 Pratt, H. C., 2 lt. 4 cav., San Francisco, Cal.
 Pratt, Richard H., brig. gen., Union League, Philadelphia.
 Prentice, J., 2 lt. art. corps, Fremont, S. C.
 Price, G. E., 2 lt. 10 cav., Ft. Robinson, Neb.
 Prichard, G. B., jr., capt. 5 cav., Ft. Huachuca.
 Purlington, G. A., 1 lt. 8 cav., Ft. Sill, Okla.
 Purviance, S. A., 1 lt. 4 cav., Ft. Leavenworth.
 Quinlan, D. P., lt. 9 cav., Corvallis, Ore.
 Ramsey, Frank De W., capt. 9 inf., 22 Jackson Place, Washington, D. C.
 Randolph, H. M., maj., Denver, Col.
 Randolph, W. F., maj. gen. ret., 1317 N. H. ave. N. W., Washington.
 Rankin, R. C., maj., Las Vegas, New Mex.
 Rawle, James, lt., Bryn Mawr, Pa.
 Rawle, Wm. B., lt. col. 211 S. 6th, Philadelphia.
 Raymond, J. C., capt. 2 cav., Ft. Meade, S. D.
 Raysor, M. C., 1 lt. 5 cav., Ft. Apache, Ariz.
 Read, B. A., 1 lt. 6 cav., Ft. Meade, S. Dak.
 Read, G. W., capt. 9 cav., Ft. Riley, Kan.
 Read, John H., jr., 2 lt. 14 cav., Manila, P. I.
 Read, R. D., jr., maj. 10 cav., Ft. Robinson, Neb.
 Reaney, R. J., 1 lt. 2 cav., Manila, P. I.
 Reed, Wm. O., 1 lt. 6 cav., World's Fair, St. Louis.
 Reeves, Jas. H., capt. 14 cav., Manila, P. I.
 Remington, F., 301 Webster ave., New Rochelle, New York.
 Renziehausen, W. B., 1 lt. 4 cav., Presidio, Monterey, Cal.
 Rethorst, Otto W., 1 lt. 8 cav., Ft. Sill, Okla.
 Reynolds, Robt. W., 2 lt. 13 cav., Manila, P. I.
 Rhea, J. C., 1 lt. 7 cav., Camp Thomas, Ga.
 Rhodes, A. L., 2 lt. art. corps, Ft. Strong, Mass.
 Rhodes, C. D., capt. 6 cav., Washington, D. C.
 Rice, S., capt. 3 cav., Ft. Assiniboine, Mont.
 Rich, A. T., 2 lt. 26 inf., Ft. Sam Houston, Tex.
 Richard, J. J., capt., 23 Walling st., Providence, R. I.
 Richmond, H. S., capt., 747 Madison ave., Albany, N. Y.
 Ridgway, T., capt. art., Ft. Snelling, Minn.
 Riggs, Kerr T., 2 lt. 14 cav., Manila, P. I.
 Righter, J. C., jr., 1 lt. 4 cav., Presidio, San Francisco, Cal.
 Ripley, Henry L., maj. 8 cav., Ft. Sill, Okla.
 Ripple, Ezra H., Scranton, Pa.
 Rivers, T. R., capt. 4 cav., Presidio, S. F., Cal.
 Rivers, Wm. C., capt. 1 cav., Manila, P. I.
 Robe, Chas. F., brig. gen. ret., San Diego, Cal.
 Roberts, T. A., capt. 7 cav., Ft. Myer, Va.
 Roberts, Wm. M., 1 lt. M. D., Ft. Sill, Okla.
 Robertson, S. W., 2 lt. 15 cav., Ft. Ethan Allen.
 Rockenbach, S. D., capt. 12 cav., Manila, P. I.
 Rockwell, V. LaS., 1 lt. 11 cav., Ft. Des Moines.
 Rodgers, A., lt. col. 15 cav., Ft. Ethan Allen, Vt.
 Rodney, D. R., 2 lt. 5 cav., Ft. Apache, Ariz.
 Rodney, G. B., 1 lt. 5 cav., Ft. Apache, Ariz.
 Rodney, W. H., 2 lt. 1 cav., Ft. Clark, Tex.
 Roe, C. F., maj. gen., 280 Broadway, N. Y.
 Roome, B. R., lt., Pier 32 New E River, N. Y.
 Roscoe, David L., 2 lt. 1 cav., Ft. Clark, Tex.
 Rosenbaum, O. B., capt. 26 inf., Ft. Sam Houston, Tex.
 Ross, J. O., 1 lt. 15 cav., gen. hosp., Washington Bks., D. C.
 Rothwell, T. A., 2 lt. 5 cav., Ft. Duchesne.
 Roudiez, Leon S., capt. q. m. dept., Ft. Riley, Kan.
 Rowan, H., maj. art., Ft. Terry, N. Y.
 Rowell, M. W., capt. 11 cav., Manila, P. I.
 Rucker, Louis H., brig. gen. ret., Los Angeles.
 Ruggles, F. A., 2 lt. 15 cav., Ft. Ethan Allen, Vt.
 Ruh'en, G., lt. col. Q. M., Washington, D. C.
 Russell, E. K., maj. ret., 1005 S. 49 st., Philadelphia.
 Russell, F. W., lt., Plymouth, N. H.
 Russell, Geo. M., 2 lt. 14 cav., Manila, P. I.
 Russell, G., maj. ret., Grand Hotel, N. Y.
 Rutherford, S. MCP., capt. 4 cav., Ft. Walla Walla, Wash.
 Ryan, James A., capt. 15 cav., Ft. Ethan Allen.
 Ryan, John P., capt. 6 cav., Ft. Leavenworth.
 Ryan, T. F., 1 lt. 11 cav., Ft. Leavenworth.
 Sands, G. H., capt. 6 cav., Ft. Meade, S. Dak.
 Sargent, H. H., capt. 2 cav., College Sta., Tex.
 Sawtelle, C. G., jr., capt. 8 cav., Jefferson Bks.
 Saxton, Albert E., capt. 8 cav., Jefferson Bks.
 Sayre, Farrand, capt. 8 cav., Ft. Leavenworth.
 Sayre, R. H., lt. 9 E 40 st., New York.
 Schenck, A. D., lt. col. art. corps, Ft. Stevens, Oregon.
 Scherer, L. C., capt. 4 cav., War Col., Washington, D. C.
 Schermerhorn, F. E., capt., 1420 Chestnut st., Philadelphia.
 Schofield, R. McA., capt. Q. M. D., St. Paul.
 Schroeter, A. H., 1 lt. 1 cav., Ft. Sam Houston, Texas.
 Schultz, Theo., 1 lt. 14 cav., Manila, P. I.
 Schuyler, Walter S., lt. col. 2 cav., care Mil. Sec., Washington.
 Schwan, Theo., brig. gen. ret., 1310 20th st. N. W., Washington.
 Schwarzkopf, Olof, vetn. 3 cav., Ft. Assiniboine, Mont.
 Scott, Geo. L., maj. 10 cav., Onigum, Minn.
 Scott, Hugh L., maj. 14 cav., Manila, P. I.
 Scott, W. J., 1 lt. 10 cav., Ft. Robinson, Neb.
 Scott, W. S., capt., col. Phil. Constabulary, Manila.
 Scott, W. S., capt. Q. M. D., Cheyenne, Wyo.
 Seoane, C. A., 1 lt. 3 cav., Ft. Yellowstone, Wyo.
 Service, S. W., vetn. 10 cav., Ft. Mackenzie, Wyo.
 Sharpe, H. G., col. sub. dept., Washington, D. C.
 Sheldon, R., capt. 18 inf., Ft. Leavenworth.
 Shelley, J. E., 1 lt. 11 cav., Ft. Des Moines, Ia.
 Sheridan, M. V., brig. gen. ret., 1816 Jefferson Place, Washington.
 Sheridan, P. H., 2 lt. 5 cav., Ft. Huachuca.
 Shunk, Wm. A., maj. 8 cav., Defafield, Wis.
 Sibley, F. W., maj. 2 cav., Manila, P. I.
 Stickel, H. G., maj. 12 cav., Manila, P. I.
 Sidman, F. E., 2 lt. 8 cav., Ft. Sill, Okla.
 Sievert, H. A., capt. 9 cav., Ft. Leavenworth.
 Sillman, Robt. H., 1 lt. 15 inf., Monterey, Cal.
 Sills, William G., capt. 1 cav., Ft. Sam Houston, Tex.
 Simms, C. W., col., Ronceverte, Greenbrier Co., W. Virginia.
 Simpson, W. J., capt. 6 inf., Ft. Leavenworth.
 Simpson, W. S., capt., Bovina, Texas.
 Sirmyer, Edgar A., capt. 8 cav., Ft. Riley, Kan.
 Siavens, T. H., capt. Q. M. D., Washington.
 Slocum, H. J., maj. 2 cav., Manila, P. I.
 Slocum, S. L. H., capt. 8 cav., Jefferson Bks, Mo.
 Smalley, Howard R., 2 lt. 2 cav., Manila, P. I.
 Smedberg, Wm. R., maj. ret., 1611 Larkin st., San Francisco.
 Smedberg, W. R., jr., capt. 14 cav., Manila, P. I.
 Smith, A. L., lt. col. sub. dep., St. Louis, Mo.
 Smith, Cornelius C., capt. 14 cav., Manila, P. I.
 Smith, Frederick McC., lt. art. corps, Ft. Williams, Me.
 Smith, Gilbert C., 1 lt. 2 cav., Manila, P. I.
 Smith, Harry R., col., Clarksburg, W. Va.
 Smith, M. C., capt. 14 cav., Manila, P. I.
 Smith, Selwyn D., 1 lt. 5 cav., Ft. Apache, Ariz.
 Smith, Talbot, 2 lt. 8 cav., Ft. Riley, Kan.
 Smith, Walter D., 1 lt. 8 cav., Ft. Des Moines.
 Smith, Walter H., 2 lt. 11 cav., Ft. Des Moines.
 Smith, Walter H., 2 lt. 13 cav., Manila, P. I.
 Somerville, Geo. R., 2 lt. 14 cav., Manila, P. I.
 Spaulding, O. L., capt. art. corps, Ft. Leavenworth.
 Sproule, Wm. A., vetn. art., Ft. D. A. Russell.

- Stancliff, Ray J., vetn. 8 cav., Jefferson Bks.
 Starr, C. G., maj. inf., Manila, P. I.
 Stedman, C. A., col. 5 cav., Ft. Huachuca, Ariz.
 Steele, Matt. F., capt. 6 cav., Ft. Leavenworth.
 Steever, Edgar Z., col. 4 cav., Ft. Walla Walla.
 Sterling, E. K., 2 lt. 3 cav., Ft. Assiniboine.
 Sterrett, R., 1 lt. 9 cav., Ft. Leavenworth.
 Steunenburg, Geo., 1 lt. 13 cav., Manila, P. I.
 Stevens, Chas. J., capt. 2 cav., Manila, P. I.
 Stevenson, Wm. L., 2 lt. 11 cav., Ft. Des Moines.
 Stewart, Cecil, capt. 4 cav., Portland, Ore.
 Stewart, C. W., lt. 5 cav., Ft. Huachuca, Ariz.
 Stewart, T. J., brig. gen., Harrisburg, Pa.
 Stiles, J. C., com. nav. bat., Brunswick, Ga.
 Stockle, Geo. E., capt. 8 cav., Jefferson Bks.
 Stodter, C. E., capt. 9 cav., Ft. Leavenworth.
 Stopford, F. W., 1 lt. art., Ft. Monroe, Va.
 Stott, Clarence A., 2 lt. 12 cav., Manila, P. I.
 Straub, Oscar I., capt. art., Ft. Leavenworth.
 Strong, F. S., capt. art., 1615 K st., Washington.
 Stroug, G., capt., 108 Dearborn st., Chicago.
 Stryker, Goss L., 2 lt. 6th cav., Ft. Meade, S. D.
 Sturges, Dexter, 1 lt. 13 cav., Manila, P. I.
 Sturges, Edw. A., 1 lt. 5 cav., Ft. Apache, Ariz.
 Sues, Geo. W., capt., 4128 Ellis ave., Chicago, Illinois.
 Sumner, S. S., maj. gen., Oklahoma City, Okla.
 Suplee, E. M., capt. 14 cav., Davenport, Ia.
 Sweeney, C. B., capt. 13 cav., Manila, P. I.
 Swift, Eben, maj. 12 cav., Ft. Leavenworth.
 Swift, Eben, jr., 1 lt. 11 cav., Ft. Leavenworth.
 Swigert, Samuel M., col. ret., 2205 Green st., San Francisco.
 Symington, John, 2 lt. 11 cav., Ft. Riley, Kan.
 Tate, Daniel L., capt. 3 cav., Boise Bks, Idaho.
 Tatum, H. C., 2 lt. 7th cav., Camp Thomas, Ga.
 Taulbee, Joseph F., 2 lt. 2 cav., Manila, P. I.
 Taulbee, M. K., 1 lt. P. R., Cayey.
 Taylor, C. W., maj. 13 cav., Phenix Bldg., St. Paul, Minn.
 Taylor, T. B., 1 lt. 11 cav., Ft. Des Moines.
 Taylor, W. R., 1 lt. 3 cav., Ft. Assiniboine.
 Tempany, J., vetn. 9 cav., Ft. Riley, Kan.
 Terrell, H. S., 1 lt. 10 cav., Ft. Mackenzie, Wyo.
 Thayer, Arthur, capt. 3 cav., West Point.
 Thomas, C. O., jr., 1 lt. 1 cav., Manila, P. I.
 Thomas, Earl D., col. 11 cav., Ft. Des Moines.
 Thurston, N. B., lt. col., 176 W. 87th st., N. Y.
 Tilford, J. D., 1 lt. 1 cav., Ft. Leavenworth.
 Tompkins, C. H., brig. gen. ret., 1427 20th st., Washington, D. C.
 Tompkins, D. D., 2 lt. 10 cav., Ft. Mackenzie.
 Tompkins, E. R., 1 lt. 11 cav., Ft. Des Moines.
 Tompkins, F., capt. 11 cav., Ft. Des Moines.
 Towar, Albert S., col. pay dept., Chicago.
 Towles, Churchill, maj., Houston, Tex.
 Townsend, C. C., capt., Greeley, Col.
 Townsend, P. C., Corsicana, Tex.
 Townshend, Orval P., capt. P. R., Cayey.
 Traub, Peter F., capt. 5 cav., Ft. Leavenworth.
 Treat, Chas. G., lt. col., com. cadets, West Point.
 Tremaine, Wm. C., 1 lt. 15 cav., Ft. Ethan Allen.
 Tripp, S. O., lt. col., Peoria, Ill.
 Trippe, P. E., capt. 12 cav., 110 E. Broad st., Richmond, Va.
 Trout, Harry G., capt. 2 cav., Manila, P. I.
 Troxel, Orlando C., 2 lt. 12 cav., Manila, P. I.
 Tucker, W. F., lt. col. pay dept., Manila, P. I.
 Turner, Fred. G., 1 lt. 6 cav., Ft. Meade, S. Dak.
 Turnbull, W., 1 lt. M. D., Ft. Strong, Mass.
 Tuthill, A. M., capt., Morenci, Ariz.
 Tyner, Geo. P., 1 lt. 2 cav., Manila, P. I.
 Uri, J. H., vetn. 6 cav., Ft. Meade, S. D.
 Valentine, Wm. S., capt. 5 cav., Ft. Wingate.
 Valliant, R. D., 2 lt. 3 cav., Ft. Assiniboine.
 Van Deusen, G. W., capt. art., Manila.
 Van Leer, S., 1 lt. 15 cav., Ft. Ethan Allen.
 Van Natta, T. F., jr., 2 lt. 8 cav., Fort Sill, O. T.
 Vans Agnew, R. S., vet. 5 cav., Ft. Apache, Ariz.
 Van Voorhis, D., 1 lt. 3 cav., Ft. Leavenworth.
 Varnum, C. A., maj. 9 cav., Ft. Riley, Kan.
 Vestal, S. P., capt. 7 cav., Ft. Bayard, N. M.
 Vidmer, Geo., capt. 11 cav., World's Fair Station, St. Louis.
 Vige, C. D., brig. gen. ret., 2648 Orchard ave., Los Angeles, Cal.
 Vierra, F. M., lt., Salinas, Cal.
 Vroom, P. D., brig. gen. ret., Manhattan Club, New York.
 Wade, James F., maj. gen., Governor's Island.
 Wade, John P., capt. 2 cav., Governor's Island.
 Wagner, A. L., col., mil. sec. dept., 22 Jackson Place, Washington, D. C.
 Wagner, H., lt. col. ret., 201 W. 43 st., N. Y. City.
 Waite, H. De H., 1 lt. ret., Berkeley, Cal.
 Walcutt, Chas. C., jr., capt. (cav.) qm. dept., Prescott, Ariz.
 Waldo, Rhinelander, 1 lt. 17 inf., Manila, P. I.
 Walker, K. W., capt. 15 cav., Ft. Ethan Allen.
 Walker, Kirby, capt. 14 cav., Manila, P. I.
 Walker, R. W., 1 lt. 5 cav., Ft. Huachuca, Ariz.
 Wallach, R. R., 1 lt. 3 cav., Ft. Assiniboine.
 Walsh, R. D., capt. 9 cav., Ft. Leavenworth.
 Wampold, L., capt., 4850 Kimbark ave., Chicago.
 Warburton, C. E., capt., 704 Chestnut st., Philadelphia.
 Ward, K. M., capt., 43 South street, New York.
 Ward, F. K., lt. col. 1 cav., Ft. Clark, Tex.
 Warren, Rawson, 2 lt. 11 cav., Ft. Des Moines.
 Wassell, Wm. H., capt. 22 inf., Manila, P. I.
 Waterman, John C., capt. 7 cav., Grand Rapids.
 Watrous, J. A., maj. ret., 272 Lyon st., Milwaukee.
 Watson, Jas. W., capt. 10 cav., 737 Iberville st., New Orleans.
 Watson, J., 1 lt. 8 cav., Jefferson Bks, Mo.
 Watts, C. H., maj. 5 cav., Ft. Huachuca, Ariz.
 Wells, A. B., brig. gen. ret., Geneva, N. Y.
 Wells, B., capt., Telluride, Col.
 Wesendorff, Max, capt. ret., 1075 Williams st., Elizabeth, N. J.
 Wesson, Chas. M., 1 lt. 8 cav., West Point.
 West, Chas., lt. col., Enid, Okla.
 West, E. S., 1 lt. 7 cav., Ft. Myer.
 West, F., lt. col., insp. gen., Oklahoma City.
 West, P. W., capt. 11 cav., San Francisco.
 Westmoreland, Wade H., 2 lt. 11 cav., Fort Riley.
 Wetmore, W. B., maj., Allenhurst, N. J.
 Weibrecht, Chas., lt. col., Alliance, O.
 Weyrauch, Paul H., 2 lt. 14 cav., Manila, P. I.
 Wheatley, Wm. F., 2 lt. 5 cav., Whipple Bks.
 Wheeler, Fred, maj. ret., Mass. Inst. Tech., Boston, Mass.
 Wheeler, H. W., maj. 11 cav., Ft. Des Moines.
 Whigam, W. H., capt., 38 Loomis st., Chicago.
 White, Geo. P., capt. (cav.) qm. dept. Presidio, San Francisco.
 White, H. A., capt. 11 cav., Ft. Leavenworth.
 Whitehead, H. C., capt. 10 cav., Ft. Robinson.
 Whitesides, J. G., lt., 3rd floor Keith Bldg., Philadelphia, Pa.
 Whitlock, F. O., 1 lt. 14 cav., West Point.
 Whitman, W. M., capt. 13 cav., Manila, P. I.
 Whiteside, S. M., brig. gen. ret., Bethesda, Md.
 Whiteside, W. W., 1 lt. 15 cav., Ft. Ethan Allen.
 Wieman, Henry, 176 Grove st., Brooklyn, N. Y.
 Wilen, John W., 1 lt. 13 cav., Manila, P. I.
 Williams, A. E., capt. 3 cav., Ft. Apache, Ariz.
 Willard, Harry O., capt. 5 cav., 13th and Douglass sts., Omaha, Neb.
 Wills, H. S., lt. 86 Allen st., Albany.
 Wilson, J. C., maj., 144 22d st., Chicago, Ill.
 Wilson, James H., brig. gen. ret., 1805 Rodney st., Wilmington, Del.
 Winans, E. B., jr., capt. 4 cav., Ft. Walla Walla.
 Windsor, Henry, jr., Revere Copper Co., Boston, Mass.
 Winfree, S. W., 2 lt. 9 cav., Ft. Riley.
 Winham, F. W., capt., Salinas, Cal.
 Winn, John S., capt. 2 cav., Manila, P. I.
 Winnia, C. C., 1 lt. 5 cav., Ft. Huachuca.
 Wint, Theodore J., brig. gen., Omaha, Neb.
 Winter, J. G., jr., 2 lt. 6 cav., Ft. Meade, S. Dak.
 Winter, M. A., col., 339 Pennsylvania ave., Washington, D. C.
 Winterburn, G. W., 1 lt. 9 cav., Ft. Riley.

Winters, Wm. H., 1 lt. 13 cav., Manila, P. I.
 Wise, H. D., capt. 9 inf., Madison Bks, N. Y.
 Wisser, J. P., maj. insp. genl. dept., S. F., Cal.
 Wood, Edward E., col., West Point, N. Y.
 Wood, John P., lt., 521; N 22d st., Philadelphia.
 Wood, Leonard, maj. gen., Manila, P. I.
 Wood, Robert E., 1 lt. 3 cav., West Point, N. Y.
 Wood, Thomas J., brig. gen. ret. (maj. gen.),
 121 N. Main st., Dayton, Ohio.
 Woodruff, Carle A., gen. ret., Raleigh, N. C.
 Woodruff, Charles A., brig. gen. ret., 2802 Van
 Ness ave., San Francisco, Cal.
 Woodruff, Wm. S., 1 lt. Porto Rico regt., Cayey.
 Woodward, Samuel L., brig. gen. ret., 5710
 Clemens ave., St. Louis, Mo.

Wotherspoon, W. W., lt. col. 14 inf., War Col.
 Washington, D. C.
 Woude, A. J., 1 lt. 6 cav., Ft. Keogh, Mont.
 Wright, E. S., capt. 1 cav., Ft. Clark, Tex.
 Wright, Wm. R., lt., 71 Leonard st., New York
 Yates, A. W., capt. qm. dept., Portland, Me.
 Yates, Wm., capt. 14 cav., Laramie, Wyo.
 Young, E. C., col., Chicago.
 Young, Samuel B. M., lt. gen. ret., gen. hos.,
 Hot Springs, Ark.
 Zane, Edmund L., 2 lt. 14 cav., Manila, P. I.
 Zell, Edward M., 2 lt. 7 cav., Ft. Myer, Va.
 Ziun, George A., maj. eng., Wheeling, W. Va.

 **Publisher's Notices.** 

“EL GRAN GONZALO.”

Officers and soldiers who have had their tastes for cigars of fine quality sharpened by a tour of duty in Manila, where such cigars can be had at a reasonable price, as well as those who have such taste independently of service in the Archipelago, will find probably the best American substitute for the Germinal Perfecto in Filogamo and Alvarez's product—El Gran Gonzalo. This excellent cigar can be purchased from any officers' club or post exchange.

“ALEXANDER'S BOOTS.”

To invite the attention of the JOURNAL'S readers to Alexander's boots and shoes is like hinting to them that they ought to make the acquaintance of the Army Regulations or the Drill Book. Is there any person in the service who has not heard of Alexander's boots and shoes? But if there is we do not expect him to confess his ignorance.

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The JOURNAL has had no more satisfactory work done for it than that which has been done by J. P. Cooke & Co., of Omaha. It can confidently recommend this firm to the patronage of all persons in need of rubber stamps or other articles manufactured by it. Post exchanges that employ metal checks will do well to order them from J. P. Cooke & Co.

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Can any man have a higher aim in life than that of furnishing the means of healthy, honest enjoyment to his fel-

low man? How long and dreary the winter evenings would be in quarters and post exchanges if billiard and pool tables were not there! What name then is more surely enshrined in the American soldier's affection than that of the Brunswick-Balke-Collender Co?

“POLISHINE.”

All time spent by a soldier in cleaning his equipment is time positively thrown away — *provided* he can keep his equipment bright and clean without such expenditure of time. And there is nothing that comes as near achieving this result as the use of Polishine.



sion, and brings the nearest cartridge exactly opposite the striker.

The cylinder and barrel are mounted so as to be capable of a backward and forward travel upon a kind of platform made by the handle. On the fall of the hammer and the firing of the cartridge, the backward energy of the recoil immediately slides the barrel and cylinder to the rear, the pressure being taken up by a long limb pivoted inside the stock, which is called the recoiling lever. Through the lever passes a pin encircled by a spiral spring, and the backward travel serves to cock the hammer and also to compress the spring. The cylinder and barrel are then carried forward, under the action of the spring-actuated recoiling lever, aided by the rebound from the recoil frame at the back of the stock, again to slide back by the force of the recoil on firing the next shot.

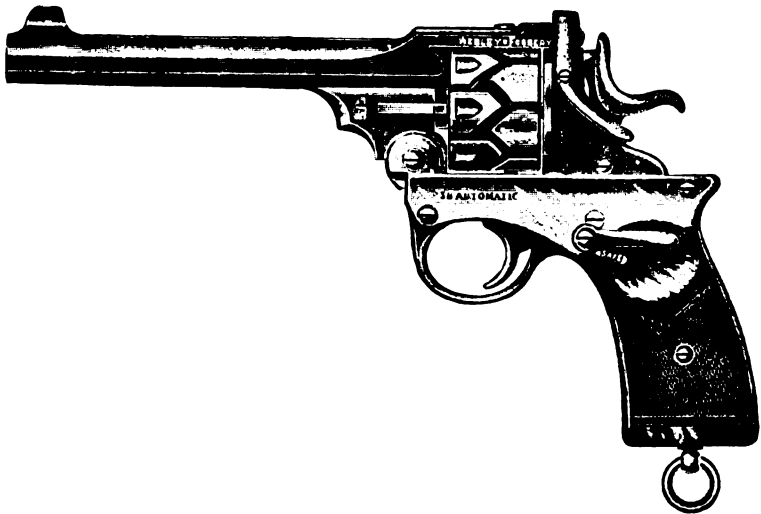
Roughly as I have sketched this, I think the principle has been made clear. It now remains to explain the revolution of the cylinder.

An extension of the trigger-guard passes upwards through the body of the revolver and is, of course, firmly fixed, by which I mean that it is in no way under the influence of the recoiling parts. A projection is formed on this extension, and is called the cylinder rotating stud. A glance at the cylinder shows a peculiarly shaped recess formed all around it, and it will be seen that the rotating stud, projecting from the body, must project into this recess.

At the moment of firing, the cylinder being in its forward position, the stud lies at the extremity of the straight portion of the recess nearest the hand of the shooter. Immediately afterwards the cylinder flies back under the influence of recoil, and is revolved until it comes to rest with the stud in position at the front. Under the influence of the return movement a further rotary motion then takes place, bringing the stud to the back and the cartridge into position to receive the blow of the hammer. Thus the necessary rotation is automatically imparted, half by the forward, half by the return travel of the recoiling parts.

The mechanism is very simple, is very strong and very

unlikely to get out of order, which is a great desideratum in a service weapon. The bullet being heavier than that of any other automatic pistol yet produced, has a greater stopping power, which is a considerable advantage at close quarters. The length of the revolver is twelve inches and the weight two pounds eight and one-half ounces. It fires a bullet of .455 diameter, weighing 265 grains. The six cartridges carried by the Webley-Fosbery can all be discharged with good aim in six seconds. In appearance the new revolver is very similar to an ordinary service one. The grip of the hand is much surer, because most of the recoil is absorbed by the pistol itself, which utilizes it for revolving the



cylinder to a fresh cartridge with each shot, at the same time leaving the hammer at full cock. Besides firing the .455 cartridge made for the pistol, which is charged with cordite, in case of emergency either of the following cartridges can also be used: .455 with 18 grs. of black powder, .265 grs. lead bullet; .450 with 13 grs. of black powder, .255 grs. lead bullet.

There is on the left of the stock a safety latch, just opposite the thumb. It can be operated, when the hammer is either at half or full cock, by locking the recoiling parts of the revolver to the body, so that the hammer does not rest

on the half cock, but is raised and held back by the cocking stud. The revolver can be carried at full cock, ready for action, and be perfectly safe, all that is necessary to bring it into action being to shove down the safety latch.

There is also provided a clip holding six cartridges, which enables the firer to load this revolver as quickly as any other automatic pistol. The chief advantage lies in the fact that the chambers can be reloaded simultaneously, the clip remaining with the cartridges, and upon breaking the revolver after firing, the clip and fired casés are ejected together, and a fresh clip can at once be inserted. These clips can be re-loaded.

After loading, the hammer can be left at half cock without using the safety latch and be perfectly safe. When it is desired to shoot, all that is necessary is to cock the hammer and pull the trigger, and then the automatic action begins.

This same firm makes the same pistol in .38 caliber, taking eight cartridges. The price is about twenty-five dollars in England for either pistol.



CAVALRY UPON THE REAR OF THE JAPANESE ARMY IN APRIL AND MAY, 1904.

TRANSLATED FROM "REVUE DU CERCLE MILITAIRE."
BY MAJOR EBEN SWIFT, TWELFTH CAVALRY.

AFTER the retreat of the Russian forces following the battle of Turentchen on the 1st of May, it will be remembered that considerable astonishment was expressed at a report that the Russian cavalry were still in Korea, and that they had taken possession of several places occupied by Korean and Japanese troops. The question was asked, whence came these troops and who were they? It is certain that the presence of this Russian force in Korea at the time when the main body was in full retreat at the north of the Yalu, was puzzling. The following account from the pen of the Russian Captain Eletse, who is attached to the staff of General Kuropatkin, explains this movement in detail:

The present war has already proved how hard it is to fight the Japanese. If it is true, it is because the latter unite to the knowledge of modern science all the fanaticism and stubbornness of the Russians, therefore it is necessary in order to bring good results to oppose them by these same qualities.

One of the best means of striking our adversaries, who possess such astonishing energy and tenacity, is the raid upon their rear and communications. One of the most brilliant raids, both in its execution and results is that of Lieutenant-Colonel Madritov into Korea, which I will now describe:

The principal object of the raid was to reconnoiter the northeast portion of Korea. To do this it was necessary to reach the rear of General Kuroki's army, concentrated upon the Yalu ; to move rapidly into Korea towards the south ; to examine the lines of defense of the enemy, and do as much harm as possible by attacking his flanks and destroying his supplies.

Colonel Madritov's detachment consisted of the following mounted troops: The Sixth Sotnia of the Oussouri regiment of Siberian Cossacks ; one troop of Caucasian Cossack volunteers ; several detachments of scouts from the First Rifle Regiment of Siberia, and the Fifteenth Rifle Regiment, to which were added fifty natives who were exclusively charged with the transmission of information to headquarters. The total was five hundred horsemen.

The train was reduced to the lowest limit and consisted entirely of pack animals. Colonel Madritov, of the General Staff, an officer who had gained great experience in the Boxer War, was chosen to command the detachment. Possessed of great courage, energy and coolness under embarrassing circumstances, this officer was a model chief for a partisan force. The Oussouri troop was commanded by Lieutenant Sosiedov with Cornet Serebriakov as his adjutant. The Caucasian troop was led by Lieutenant Girs, who likewise had taken part in the last war, and had a good knowledge of the country. His assistants were Lieutenant Linevitch, a brilliant young artillery officer and a son of the General of that name, and Lieutenant Savitch. The detachment of scouts of the First Rifle Regiment was under the command of Captain Bodisko, who had also been distinguished during the last war. Under him were Lieutenants Krouze, Eilers and Pioulovskii. The scouts of the Fifteenth Rifle Regiment were under Captain Bobrov, who was also an accomplished officer. His subordinates were Lieutenants Krasnenskii and Leparskii. The detachment including its chief, therefore, contained thirteen officers, a surgeon and some members of the Hospital Corps.

At the end of March the detachment left Mukden for Khouanjensian, where it stopped three days. Having learned

that there were no Japanese upon the proposed route, the detachment moved across the Yalu and entered Korea at Vianzygoumyn. From that point Captain Bobrov went with his own command and the Ourssouri Cossacks to reconnoiter in the direction of Piok-tan. Finding that the enemy had already left Piok-tan, Bobrov destroyed a lot of provisions and returned to the detachment.

On the same day the Caucasian troop reconnoitered towards Ouion. The detachment was well received at the town of Tchkhosan. The garrison of this town consisted of a hundred Korean soldiers under their colonel. Colonel Madritov invited the colonel and the chief official of the town to a banquet. The latter, after eating and drinking quite freely, went home and fled into the country. On that same night the bivouac of the detachment was attacked by Korean troops, who were driven off by the volleys fired by the guard.

Not satisfied with their perfidy on this occasion, the Koreans set fire to the town itself at several points. After having disarmed the garrison, Madritov continued in the direction of Kouaan and Kange. The prisoners and incendiaries captured by the Cossacks declared that the hostile attitude of the officials was caused by Japanese influence; that Japanese officers were acting as instructors for the garrisons in the country, and that five thousand Korean volunteers were ready to resist the Russian invasion. It was also found that the headquarters of the Korean force was at Kange.

The Caucasian Cossacks who had been sent to Ouion were also attacked by Koreans from ambush. These last were dispersed with heavy loss. The Cossacks had one killed and five wounded.

Madritov was surprised at the attitude of a population to which he had offered no injury, and he hesitated as to his line of conduct. On the one hand, to fulfill his duty, it would be necessary to advance as rapidly as possible toward the south; on the other hand, he wished to punish the Koreans as they deserved. He finally decided to carry out his principal mission and to leave the question of punishment to a later occasion. As Piok-tan was within the zone occu-

pied by the Japanese, he marched directly towards the east by Tchkhosan, Kogosan, and Boudji.

In the meanwhile, the appearance of the Russian patrols in rear of the Japanese had been discovered. Madritov, therefore, left the road and took to the mountains, following narrow paths, upon which it was necessary to proceed in single file. It was also necessary to make numerous false trails in order to deceive the enemy. After a long and painful march, the detachment reached the road at Boudji, where the River Tchintchingan was crossed, and the detachment proceeded southward in the direction of Khitch-Khen. On the march the above mentioned river, which was supposed to be a second line of defense of the Japanese in rear of the Yalu, was explored by one patrol. The patrol reported that so far the river was not defended and that there were no garrisons upon its banks.

The city of Khitch-Khen was not occupied by the enemy, but contained large stores of provisions which had been collected by order of the Japanese chief commanding the district. The detachment took possession of these provisions, divided a portion among the native inhabitants and destroyed the remainder.

Further reconnaissance established that the rear of the Japanese line was open and undefended, and that all their troops were marching toward the Yalu. Evidently a Russian division thrown into Korea would have been sufficient to cause much injury and embarrassment to the Japanese.

The inhabitants of the country informed Madritov that a considerable battle had taken place at the mouth of the Yalu and that the Japanese had lost more than 2,000 killed. In support of this assertion, the natives declared that many inhabitants had been hired to carry the boxes containing the heads of the dead soldiers which had been sent to Japan. The bodies had been burned. It was added also that the Japanese wounded numbered at least 6,000.

Profiting by the fact that the enemy's rear was uncovered, Madritov resolved to advance upon his main line of communication, which passed through Viju-Anju-Pingyang. These cities and others were fortified, but occupied by rather

weak garrisons, varying in strength from 200 to 600 soldiers. Some places had a small amount of artillery.

The patrols likewise established that the Japanese had ceased landing their troops in Korea and had probably sent them to the north. It was evident that the army of Kuroki was intended to cover Korea from a Russian invasion, and to mask the movements of other armies operating against Port Arthur.

The population continued to show its hostility to our patrols, giving only unreliable information as to the Japanese and rendering it difficult to obtain food. The inhabitants, in fact, buried their provisions, drove their animals into the mountains, and hid them in distant ravines and forests. It was impossible even to procure flour, and as to oil and milk it could not be thought of, so that corn cakes were among the rarest of luxuries.

As there were no Japanese at Khitch-Khen, Madritov decided to reconnoiter the town of Anju, which is a point on the line of communication of the enemy. In place of following the road leading straight from Khitch-Khen to Anju, which would have exposed his detachment to discovery and to being cut off from its line of retreat, Madritov advanced through the mountains toward the southeast, passing through Toktchen and Kaitchkhen.

The patrols could not get exact information as to the strength of the garrison of Anju. On May 9th, at an early hour in the afternoon, the detachment reached Kaitchkhen, and after a rest of four hours went forward during the night toward Anju. On the road it was learned that rather strong reinforcements had arrived at the city on the day before.

This information forced Madritov to give up his first intention, which was to attack the city and to inform himself first if its garrison had really been increased.

The advance-guard during this night attack was composed of the Caucasian Cossacks, who destroyed the telegraph wires along the road. Madritov had to act with the greatest caution, because he had been ordered not to engage in a serious combat, so as not to embarrass himself with

wounded. This is why, on arriving several miles from Anju, he detached Bobrov to examine the town.

Bobrov had to cross at a run an open space in sight of Anju, to occupy a height 800 yards from its walls and to draw upon himself the fire of the enemy, who did not fail to show himself upon the unexpected appearance of the Russian troops. He fully executed the first portion of his task. He crossed the open space rapidly and without loss under the lively but ineffective fire of the Japanese, dismounted his troops, occupied the hill and opened fire.

Bobrov hastily concluded from the fire of the enemy that the latter did not consist of over 200 men, whom he could easily dispose of. He consequently brought up his reserve, addressed them a few words and gave the order to charge. The Japanese received the charge with a fire which was inefficient at the beginning, but when the Russians had closed to 200 yards, they were received by volleys. Bobrov was mortally wounded at one of the first volleys by two bullets. Immediately afterwards the other officers were also wounded, one by three wounds and the other by two. The detachment had thirty men killed and wounded. The Russians were obliged to stop. They fell back a little in rear of the crest, lay down and opened fire upon the enemy. As soon as the scouts attacked upon one side of the town, the Caucasian Cossacks were sent to the other side. The latter dismounted, lay down 150 yards from the wall and opened fire, preparatory to assaulting in concert with the scouts. The failure of the attack of the scouts and the strength of the garrison, which seemed to be at least 500 men, caused Madritov to decide that he could not hope to capture the city.

He accordingly ordered Lieutenant Piounovskii to take command of the scouts, to remove the dead and wounded, and to retire. The Lieutenant sent eight men to carry off the dead and wounded, but as they approached they were almost all killed by the Japanese fire. Madritov then ordered Lieutenant Linevitch to take with him a platoon of scouts and a half-troop of Cossacks and to take position on the left of the half troop commanded by Girs. Lieutenant

Linevitch was ordered to keep up a strong fire against the side of the fortress near which our wounded were lying, so as to attract the attention of the garrison towards himself. The Japanese at once began to reply to Linevitch, and the scouts profited by it to advance toward the wounded; but they also were nearly all struck.

Perceiving that all efforts to carry off the wounded merely resulted in new losses, Madritov ordered his men to a commanding position until night, in order that he might carry off the wounded under cover of darkness.

Such was the situation at 9 o'clock in the morning. The detachment had, therefore, to maintain itself in position for at least twelve hours.

At about half past nine, a Japanese company, preceded by cavalry patrols appeared on the other side of the river from the direction of Long-ben. Half of the Oussouri Cossacks immediately galloped towards the bridge and set fire to it, but the Japanese, nevertheless, rushed upon the burning bridge. The scouts of the Fifteenth Regiment and the Oussouri Cossacks drove back the Japanese company by volley fire, and it did not show itself again during the day.

The Russians continued to exchange shots with the garrison until 3 o'clock in the afternoon. At this moment, the Russian detachment was joined by Lieutenant Eilers, who had been sent with a patrol on the Ping Yang road and had destroyed the telegraph line for twelve miles. The Lieutenant reported that a column of about 600 infantry of the enemy was coming from Ping Yang. The two companies quickly appeared, one of which moved upon Anju, while the other directed itself upon the left flank of the Russian detachment. Lieutenant Linevitch, who was on the left flank, had only seventeen men on his skirmish line, so that the situation was critical. Having changed his front, Linevitch opened fire upon the company which was advancing by rushes, and shortly afterwards Captain Bodisko took post 200 yards behind him with the scouts of the First Rifle Regiment. Linevitch could then carry off the dead and wounded, and began to retire.

Bodisko allowed the Japanese to approach very close be-

fore opening fire. When they had reached the distance of seventy paces, our volleys disordered their front rank, and the rear rank, after having carried off the dead and wounded, retreated with great losses toward the fortress. Our troops awaited a new attack, but the Japanese, probably thinking that our detachment was much stronger than it was, and that it would assume the offensive on its own account, remained behind the city walls. The firing broke out anew and lasted until nightfall, when an account was made of the losses of the detachment and found to be as follows: Three officers wounded, including Bobrov, who died during the night; nineteen killed, and forty-three wounded.

The dead were buried in two ditches. Bobrov was placed with his men, and crosses were planted above the graves. The wounded were carried in improvised litters, and the detachment fell back at 2 o'clock in the morning.

At the end of about ten miles the command was halted for rest. Our soldiers, exhausted by long fighting as well as by the night march, had just gone into bivouac, when the outposts returned at a gallop and reported that the Japanese were at hand. The wounded were immediately sent off under an escort, and the detachment took up a position in a defile. After deducting the litter-bearers, the escort for the wounded and the horse-holders, there remained only 150 men for the fighting line.

The Japanese with a strength of two companies appeared at about noon and took up a position a short distance away. Friends and enemies for two hours faced each other without firing, when the Japanese retired. The Nippons probably thought that our detachment was the advance of a strong column, not suspecting that so small a force would have the boldness to place itself in rear of a great army.

After having destroyed his train, which delayed his march, Madritov fell back towards Toktchen, passing by way of Kaitchkhen. The wounded were carried by natives. A detachment was dispatched under the order of Lieutenant Girs to examine the eastern coast between Gensan and Khamkhyng.

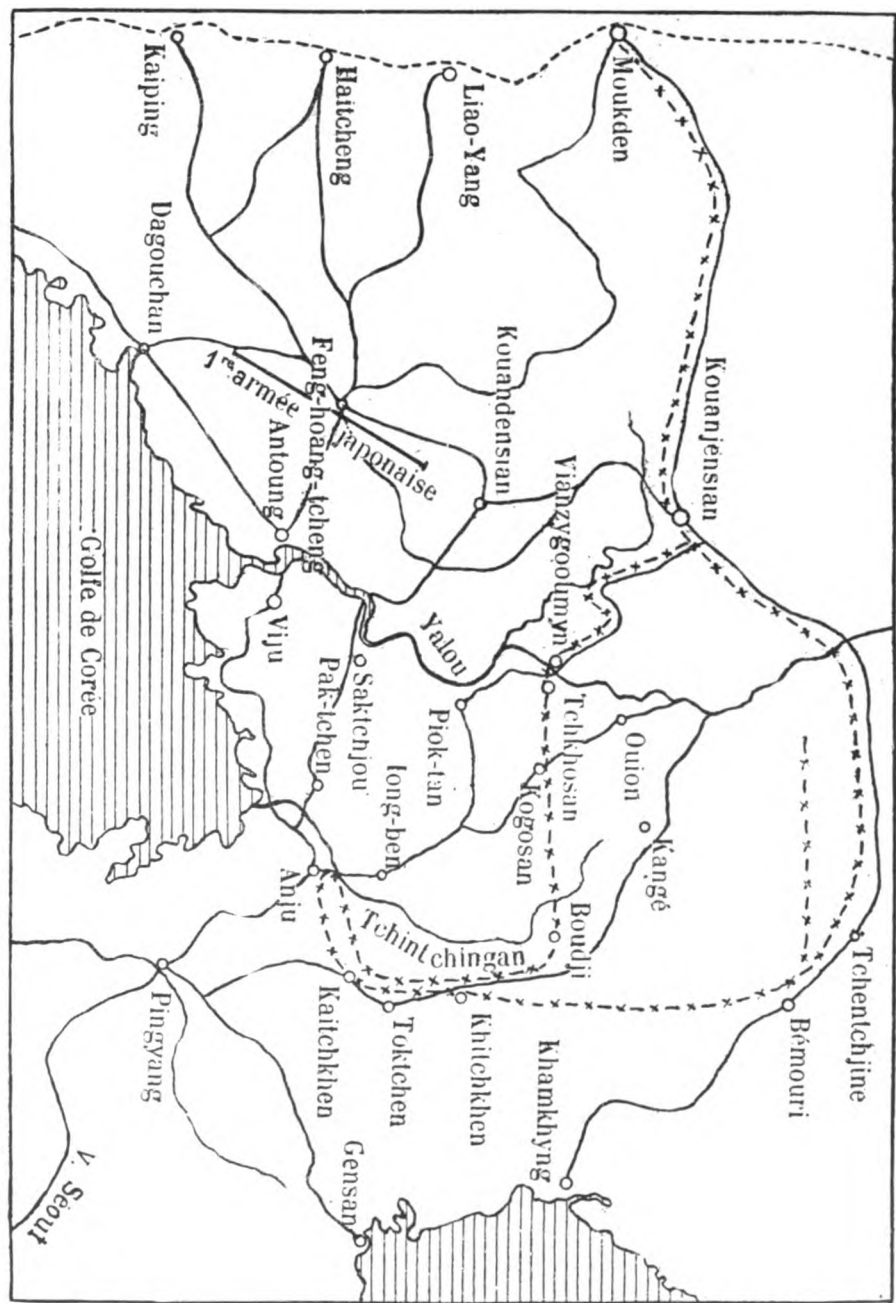
When about forty miles from Gensan, Girs learned that

the city was garrisoned by 2,000 Japanese and that the third line of defense was not entrenched between Gensan and Ping Yang. He then marched upon Khamkhyng, the richest city in southern Korea, situated in a valley surrounded by fertile plantations. The garrison of the town consisted of about 600 Korean soldiers, who received our troops with volley firing. As a punishment, Girs burned the town to the ground.

By the light of the fire the march was continued upon Tchentchjine and the main command was rejoined at the village of Bémouri, just as the latter was fighting a lively engagement with the Koreans, who held the defile in rear of the Russians. Having dispersed these Koreans on the 23d of May, the column passed through Tchentchjine, which had been abandoned by the inhabitants and troops, who had all retired to the strong fortress of Koni.

On the 27th of May Lieutenant Linevitch was sent forward with a half-troop toward the village Tchoumak-Kori with orders to hold the place at all hazards until the arrival of the column. Madritov had taken this decision because the village is upon one of the roads which crosses the Yalu and might have been held by forces of the enemy. Linevitch was received with rifle shots, but rushed on to the attack, drove the Koreans from the village and maintained himself there with the loss of one killed and three wounded. Madritov marching rapidly drove the Koreans from a new position that they occupied upon the heights and chased them towards Kange.

Since Madritov had collected all necessary information, there was no longer any reason to attack this fortress, so he retreated upon the Yalu, having burned forty-eight Korean villages, of which all the male inhabitants were fighting of their own free will against the Russians. On the 1st of June the detachment recrossed the Yalu closely followed by the Korean garrison of Kange, who kept up a continual fire. After crossing the Yalu the detachment marched on Kouanjensian, where he reported the presence of infantry, cavalry and artillery of the enemy. Madritov then fell back upon the left wing of our army, taking with him all his wounded.



- X - X - X Itinéraire du détachement russe

Echelle approximative au 1:50,000

From this it will be seen that Madritov's raid upon the rear of the Japanese army under difficult conditions had considerable results. It lasted two months. It is an example of what can be done with a small detachment commanded by a bold and energetic chief.

THE LESSONS OF THE BOER WAR AND THE BATTLE-WORKING OF THE THREE ARMS.

A LECTURE DELIVERED BEFORE THE BERLIN MILITARY SOCIETY, ON 30TH MARCH,
1904, BY MAJOR BALCK, OF THE GREAT GENERAL STAFF.

Translated by Permission.

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1. *General Conditions and Lessons for Infantry Combat.*

IF we do not enter into the question of guerilla war, only the battles up to the capture of Pretoria on the 5th June, 1900, come really under purview for tactical consideration.*

The distinguishing mark of the Boer method of fighting is one of passive defense pure and simple, which may well

*The Boers laid particular stress on this question of guerilla war, when they protested against Lord Robert's manifesto of the 13th September, 1900, directed against their determination to carry on what was practically a war of this nature. "The truth is," writes State Procurator J. C. Smits, in the *Nieuwe Rotterdamsche Courant*, 23d June, 1901, "that we have begun a new method of carrying on the war, which the enemy is stigmatizing by the old perverted name of guerilla. Having carried on the first half of the war in the old methods, we are now convinced that the English superiority in force is too great for us, and we have therefore struck out a new course, in which strategy, mobility, and the distribution of small fighting bodies over a wide extent of country are of much greater importance than a battle proper."

avoid a defeat, and stave off any decisive results from day to day, but can never achieve victory. Only the leader who has attacked and destroyed the enemy can call himself victor. The Boers failed to understand that a *counter attack* must also follow a *fire-defense*. In December, 1899, the English attacks on Magersfontein and Colenso were repulsed; but the Boers allowed the English abundance of time to bring up reinforcements, enabling them, five weeks later, to repeat their attack on the Upper Tugela, and, after nine weeks, at Paardeberg. As the Boers only wish to keep the enemy at a distance, and drive him back by their rifle fire, they dispense with Reserves. It is astonishing with what small forces such a defense is possible. As, with but few exceptions* the front and flank attacks of the English were not carried out simultaneously, the Boers were able, thanks to their mobility, to withdraw men from the less threatened positions and use them at other points. Everyone, however, did not fight in the firing line. Against the wish of the leaders, faint-hearted men remained behind under safe cover to await the result or to recover from the effects of the fatigues of fighting. Dr. Schiel† thus describes what he saw while a fierce fight was raging not far off upon Spion Kop on the 24th January, 1900, and every rifle was required:

“I arrived, after about an hour's march, at the foot of Spion Kop. * * * There I came upon a tolerably large number of Boers, who were making coffee under the protection of some overhanging rocks; others joined them there, coming from the hill; others again, went off to take part anew in the fighting, after having rested and refreshed themselves. * * * Everything was done in order and quietly; there was no attempt to drive men into action; but whoever wanted to join the firing line did so, and whoever wished to keep away altogether could do so with the greatest ease.”

*“Kriegsgeschichtliche Einzelschriften,” No. 32, p. 34; at Elandslaagte 21st October, 1899; Driefontein, 10th March, 1900; also No. 33, p. 36.

†“Mit den Deutschen im Burenkriege.”

In an unpublished account a former German officer, another companion in arms of his, made the same statement. Such casual fighters are, however, no tactical Reserves. A true offensive was foreign to the Boers; their method of attack was to creep forward from cover to cover in order better to be able to shoot down their opponents. Boldly to charge the enemy they at first ridiculed as mere stupidity on the part of the foreigners.

The defense positions consisted of long connected groups of deep rifle pits,* which, as inconspicuous as possible, were mostly placed where the enemy's eye would least expect them, special care being taken that nothing showed against the sky-line. In order to prevent the clouds of sand caused by the explosion of the guns, the ground in front of the guns was covered with the hides of freshly slaughtered animals. The grass was often burnt in front, in order that the khaki-clad English should show up in sharp contrast to the black ground beneath them.

The Boer is an adept at deceiving his enemy. Thus sham positions were made in which dummies, to serve as targets, were set up; guns using black powder were fired that attention might be drawn from the real positions (Magersfontein), and bursting charges exploded to deceive the enemy's gunners in observing the effect of their shots.

It is ingrained in the Boer nature to take advantage to the fullest extent of the carrying power of his rifle, even to over 2,000 yards, so that it was only in isolated cases that the leader could succeed in making the men reserve their fire until close range. But when this occurred the effect was very marked. There can be no question of a controlled long-range fire. Every man firing adjusts his own sights independently, and alters them according to his own observation. As the Boer shot with a fine sight, he accepted the metre-graduation of the Mauser rifle without anything further than the paces by which he estimated his distance, and opened

*Boulders proved good cover only for thin firing lines; with the men in closer formation the opinion was strongly held that the splinters from the rocks increased the effect of the bullets and endangered the people near.

fire with shots at short ranges, which were easy to mark, and allowed the enemy to advance within the zone of fire. Worthy of notice was how, in a fire-action, with an enemy lying down, they watched for the opportunity if a man raised himself. Immediately bullets began to fall, and even if these did not hit, they raised a feeling of insecurity, often nipping in the bud any attempt to advance. One thing, however, was wanting in the Boers, that was the desire resolutely to await the assault, in order to engage in hand-to-hand fighting.

The English infantry was compelled in almost all actions to advance against the enemy over a plain completely destitute of cover, and whose position was difficult to locate. An army cannot disappear as the Boer detachments were able to do. The English scouting might certainly have afforded better results; no attempt was made to tear away the veil which the Boers had spread in a great measure over the whole country. Finally, the English cavalry failed to continue scouting on foot when they could go no farther on horseback. In whatever direction the slow-moving infantry was led, the more mobile Boers were always able to oppose a new front to the enemy. The case was, however, otherwise when their increasing strength enabled the English, with their columns extending over a wide front, simultaneously to seize several positions within the veil, and to force the Boers to occupy a definite stretch of country, thus rendering them immobile. It would be wrong to endorse these tactics, which were called into being under quite exceptional circumstances, without a wider survey of the theater of war. The course of the attacks in the first battle were as follows:

One or two days before the actual attack the artillery opened on the position with shrapnel and lyddite shells from flat-trajectory guns. This fire had but little effect, as the opportunity was neglected of simultaneously bringing forward a stronger force of infantry, in order to hold the Boers to their position. The hope, too, of inducing the Boers to return the fire, in order to gain footholds for the capture of their positions, was not realized.

The attack was hurriedly carried out—after the fashion of maneuvers. In thin skirmishing lines, the reserve detachments likewise in loose order, with, as a rule, but a slight loss, a distance of about 800 yards from the enemy was reached. The volley firing laid down by the Regulations could not further be carried out, as with the thin skirmishing lines, the officer could only exercise control over the men near him.

The uselessness of this method of firing and the increasing effectiveness of the enemy's fire paralyzed all energy, and quickly engendered that fatalistic inactivity and lack of mobility, which set a limit to the attack earlier than was justified by the extent of the losses. "The void of the battlefield" has become the significant expression for a new phenomenon, opposed to which the English fighting training proved ineffectual. The invisibility works directly upon the *morale* of the man, upon the true sources of his energy and his mettle. The soldier who cannot see his enemy, ends by seeing him everywhere. From this impression to a feeling of insecurity and then to one of fear is only a step. This feeling of unsubstantiality an English officer characterizes as the most painful in the conditions of the modern offensive attack. "It originated in smokeless powder, which was used in South Africa for the first time, and through the artfulness of the Boers in making themselves invisible to their enemies. When attacking, a man has the feeling of advancing against an invisible fate, against which he possesses no weapon. Should a man wish to open fire at longer range, he shoots more or less at haphazard. The defender, however, fires as soon as a man rises and advances, without his enemy being able to see him.

The troops of the second line approached with the expectation, in the spirit of the Regulations, of carrying all before them by a bayonet charge, under the firm conviction that the Boers would not stand against an attack with the *arme blanche*. The trust in the *arme blanche* was thoroughly justified, but it must only be based on a successful issue of fire action. Before, however, the fire superiority was established, the advance by rushes began. The detachments,

meeting a heavy fire, threw themselves down and returned it, often without knowing where to aim, except in the general direction, where the enemy was supposed to be. As a rule the attack now came to a standstill. When, however, it came to storming isolated positions, only a portion of the fighting line advanced, against which the defenders could direct their fire all the more effectively, as the guns had ceased firing.

Compared with former battles, the small proportion of losses to the large number of prisoners is astonishing. Although it is true that in South Africa isolated detachments often in a short time suffered heavy losses, yet, considered as a whole, the losses were but small. They amounted in the battles to not more than fourteen per cent., although, naturally isolated, especially the smaller detachments, suffered considerably more. In their colonial wars, English troops have achieved victory by great physical exertions, still with but small actual loss of life. Such battles have the disadvantage of misleading the army in its views as to the losses which a seriously pressed home attack demands to-day. The heavy losses which English troops suffered in the Peninsula, at Waterloo, and in the Crimea have been forgotten.

Public opinion in England, which is all-powerful, influenced by sensation-hunting ignorant correspondents, went even so far astray as to consider small losses the sign of good tactical dispositions; and leaders, who have inscribed their names in history in iron characters, must give way to generals who subscribe to the precept that discretion is the better part of valor. It is conceivable that the English commanders were more or less influenced by this morbid flood, which hindered them from bringing the war to an end by summary, powerful blows. How pertinent and classical for all time are Clausewitz's words: "Let us not hear of generals who conquer without bloodshed. If a bloody slaughter is a horrible sight, then that is a ground for paying more respect to war, but not for making the sword we wear blunter and blunter by degrees, until someone steps in with one that is sharp and lops off the arm from the body." That such long drawn out wars without bloody annihilating battles

tend in the end to produce the heaviest losses, is directly proved by the war in South Africa.*

The more sternly and remorselessly a war is waged, the less are the opponents able to come to an understanding with each other; the fewer are consequently wont to be the number of prisoners. At Isandlwana (1879) an English battalion (the Twenty-fourth) succumbed, with the exception of a few who escaped, to the spears of the Zulus; at Maiwand (1880), also, scarcely a man surrendered to the Afghans, as quarter could not be depended upon. Quite otherwise was it in South Africa: Boer and Briton understood the same language; the intention to kill their opponents was seldom displayed by the Boers; equipments, horses and arms were taken from their prisoners, who were then generally let go; only a portion were interned at Pretoria, and these were well treated. We may draw a comparison here with the insults to which our prisoners in France were often treated.†

Even in the very early days of the campaign came the laying down of arms by strong detachments, which apparently was not punished with the severity which it merited. We almost get the impression that surrender was looked upon by the men as a means for getting themselves out of a difficult situation.

*The following statistics of the losses up to 8th November, 1900, are given in Conan Doyle's "Great Boer War:"

	Officers.	Men.
Fell in action	283	2,683
Wounded	1,064	12,868
Died from wounds	85	179
Missing and prisoners	283	7,330
Of these were exchanged or escaped	240	6,299
Died	3	86
Died of sickness	149	5,472
Died of accidents	3	101
Invalided	1,219	27,937

There were 368 officers and 3,462 men who met their death through the enemy's lead, as against 152 officers and 5,573 men who succumbed to sickness or accidents. The total losses of the army including prisoners, amounted to 1,782 officers and 30,002 men, out of a force of 5,880 officers and 151,546 men.

†Lieutenants Puttmann and Brüggemann, of the Third Brandenburg Regiment, in their history of the regiment, give details of the unworthy treatment to which German prisoners were subjected in France.

In country devoid of cover, commanded for a considerable distance by the enemy's fire, to break through was of course difficult; a retreat doubtless attended with great losses. It was therefore easy for the mounted Boers to waylay isolated detachments; we must also further bear in mind that the war was carried on in the hottest time of year in a country poorly supplied with water, and that the men became exhausted sooner than would have been the case under other conditions. Thus there was an excuse, for example, for the men who, exhausted after their night march, capitulated at Stormberg; not so, however, to take another example, for the detachment under Colonel Carleton, which capitulated at Nicholson's Nek after a feeble defense. Here it may certainly be admitted that individual Englishmen, who had already surrendered, stood mixed up with the Boers, so that the leader did not really know how he ought to act under the circumstances, and this hesitation was decisive of his fate. It must be imperatively required in the future that troops surrounded in open country make a serious attempt to cut their way through before there is any thought of laying down their arms. As opposed to this conception, the English court of inquiry on the 226 cases of surrender which had taken place up to 1st June, 1900, admitted justification in all but three, where only individuals had allowed themselves to be taken prisoners.

The want of success of the English attacks was to be traced to defective arms and an inadequate training in shooting under battle conditions,* and more especially to the unsatisfactory tactical training of the superior officers, whose lack of initiative and fear of taking responsibility became a

* In a competitive shooting match, picked shots at Shanhaikwan, on 18th and 19th August, 1902, made the following scores at 200 yards against the German ring target with ten shots (the highest possible score being 120): The English detachment made 84-6; the German, 79-2; the French, 73-2; the Japanese, 70-9; the Russian, 66-9; and the Italian, 46-8.

"A requirement which the English could not fulfill," remarked a Boer, "we, on the other hand, could always comply with, viz.: judging distance and independent choice of sighting by men individually. In this respect the English, as far as we could ascertain, were not only quite unskilled, but what is worse, they had been trained on an utterly erroneous system. Perhaps

by-word, while the younger officers did very much better. The troops themselves were brave enough, but not prepared for such duties as fell upon them in South Africa.

Major Balck then quotes from Lord Roberts's evidence before the War Commission as to the want of individuality and resourcefulness on the part of the English soldier at the beginning of the war, and his defects as a marksman as compared with the Boers, and his want of knowledge of how to use ground. (Report of War Commission, p. 440.)

All reports concur in the view that the sectional and company commanders showed in almost every case energy, self-reliance and determination; that their tactical training was, however, insufficient, and that the senior officers were not anxious to take responsibility upon themselves. It may be because with increasing years these latter had become more irresolute, or that they had had no practice in handling strong detachments. But the whole system of peace training was unfavorable for producing self-reliant leaders; everything was laid down, every attempt at independent action repressed. Thus General Colville declares: "It is much better for a young officer to make mistakes and learn what the consequences will be, than that he should be trained to avoid faults, as in that case he will then become a puppet, which can only move when his superior pulls the string." The fear of once blundering in the choice of expedients was extraordinary; it led to inaction, and was the cause of many favorable opportunities being allowed to slip away by those in command.

The leaders must be blamed for not understanding how to regulate the co-operation of all arms, in order to carry through a united attack. Above all, they hesitated, when the issue hung in the balance, to achieve victory for the

that this was so was of more importance than is supposed. Of thirty-five men whom we took prisoners, after they had fired at us up to 350 paces, not a single one had got his sight correct. Most of them had kept their sights fixed at 800 and 850 yards, because no order to change them had been given. Such a thing was not possible with the Boers. Certainly if a whole line of Boers had never all had their sights right, on the other hand, they had never all had them wrong. Every man could adjust his own sight, he could make a mistake; but he made the attempt to observe the change of distances."

English colors by putting into the fighting line the whole strength of their reserves. At Colenso (15th December, 1899), out of 15,600 men opposed to 5,000 Boers, only some 4,800 were actually engaged, who suffered a loss of fifteen per cent. On the 24th January, 1900, the day of Spion Kop, there were 20,000 available for the attack, of whom from 3 A. M. to 9:30 P. M., only 2,600 took part in the action; about 11 o'clock these were reinforced by another 1,600, and again at 5 by 1,500 more. What the strength of the Boers was it is impossible to state accurately; at all events there were only some 3,000 men at this spot. The English were, however, beaten, although there were 14,000 men who never came under fire at all. Here the leadership failed from lack of determination.

Various pleas have been urged in excuse for this; the numerical inferiority of the English forces at the beginning; the disproportion of the troops to the great extent of the theatre of war; the difficulty of bringing up reinforcements from the distant mother country; the eventual effect of heavy losses upon the recruiting for an army based on voluntary service; and even the influence which a defeat might have had upon the attitude of the European Powers. Still, all these pleas could not exonerate the leader on the battlefield. For this neglect the English Drill Regulations are primarily responsible, which lay down hard and fast the necessity for keeping back the reserves in a picked position. Clearly these Regulations, which were no longer suited to the times, were a heavy drag on the English army. The Infantry Regulations, while only attaching small importance to the fire action, laid great stress upon the shock action of a strong second line with the bayonet, and over-rated the importance of isolated attacks upon the course of the whole battle. Unfavorable conditions of training in the mother country militated against the development of a modern system of tactics. Whilst the importance of enveloping movements was certainly appreciated, frontal attacks were, often, even regarded as a sign of unsatisfactory tactical knowledge. But it was not recognized that enveloping movements required unconditionally the firm holding of the front, if they

are to be effective and the enemy not to be left free to withdraw at will as soon as his flank is sensibly threatened. But the English forces holding the front were handled in such a way that their feeble and hesitating movements left no doubt as to the real intentions of the attackers. It was only an empty threat with insufficient means. The knowledge also that infantry and artillery must work together in order to establish fire superiority was not general in the army. Artillery preparation in advance and infantry attack were two things sharply separated from each other.

Sounder views had developed before the outbreak of the war in South Africa in the various actions on the Northwest Frontier of India; but the troops who had taken part in these actions were shut up in Ladysmith after the early successes.

Only painfully and slowly could the troops trained at home under quite other conditions, and strengthened by reservists who had passed through a yet earlier training, accustom themselves to the new conditions.

All troops coming fresh into the field have to divest themselves of a mass of habits unconsciously acquired on the maneuver ground during peace, which have mostly led to an insufficient appreciation of the effect of weapons. This was evident with the Austrians in 1866, during the battles in August, 1870, and in the Russian abortive attempts to storm at Plevna. While the rapid course of the campaign in Bohemia hindered our then opponents from changing their tactics, we see in the Franco-German War a difference in the method of the earlier and later methods of attack, which was plainly noticeable by even the superficial observer. We need only compare, for example, the attack by the King's Grenadiers on Schloss Geisberg and that of the Grenadier Regiment No. 11 on the Gorge-Rezonville road with the attacks by the Baden Life Grenadier Regiments on the railway cutting at Nuit and the attack of the Guard on Le Bourget in order to appreciate the extent of the advance made on our tactics at that time.

In every war the impression of the effect of the enemy's fire upon soldiers only trained under peace conditions will

be so overwhelming—an impression which no peace training can convey—that all, like the Austrians in the first battles in 1866, ourselves in the Franco-German War, the Russians in the Balkan Peninsula, will be astonished at what seems to them an unprecedentedly hot fire. It was the same in South Africa. But the history of war shows that, even up to the present day, good troops fully and completely get over this impression. The leaders of all grades must only be prepared in advance to find the remedy immediately on the spot. This, however, can never lie in the defensive, but only in the attack. Major Kunz is right when he recommends that the lessons learned by any body of troops at the beginning of the war should be made known as quickly as possible for the common good of the whole army. Only in this way can mistakes be avoided, such as occurred on the 18th August, 1870, when a battalion (III. 86) attempted to make their way through the effective fire zone of the enemy in double column. Taking a comprehensive view, our Regulations of 1889 for that reason lay down: "The normal formation must be given up without hesitation, where the vicissitudes of the fighting require it." In this sentence the capability of adapting our instructions to modern conditions reaches a climax. Attempts were even made in England to justify* the new conditions, whilst still under the influence of the first failures at the Irish maneuvers of 1898, acting upon the principles enunciated by Lord Roberts as to the unassailability of the front.

Two fundamentally different tactical methods arose in the level plains of the Free State and in the mountainous country of Natal. In one case to embrace in the struggle, an extension of front, ever increasing, from fight to fight, by complete abandonment of any deep formation, before the enemy had even opened fire; in the other, a smaller breadth of front, with the deepest formation, without giving this up

*See also Lord Roberts' Order of the Day, 26th January, 1900: "Against such an enemy, every attempt to capture a position by a frontal attack will certainly fail. The only chance of success lies in the possibility of turning one or both flanks, or, which will mostly be equally effective, of threatening the enemy's line of retreat."

in the course of the battle. In the west the attacks failed because the supports, which should continually press forward to strengthen the firing line were wanting; in the east, because the weak force at the beginning was never strengthened, nor was the fire strength of the enemy ever opposed on equal terms. The caution in the Infantry Drill Regulations against the use of insufficient forces out of misplaced economy in the carrying out of a battle plan, is not given without cause after our campaign experiences. "One would constantly fight with inferior against superior numbers, and voluntarily forego the advantage that such superiority would give. An unsuccessful undertaking, however, not only causes useless losses, but damages the *morale* of the troops." The English leadership in battle was wrecked because the extension of front and a deep formation could not be reconciled with each other.

Lord Roberts's operations at Paardeberg and Bloemfontein determined the whole later course of the English tactics pursued. He had to overthrow the enemy while himself avoiding any failure; new defeats would have damaged the prestige of England, and might even have brought about the interference of some of the European Powers. How much this was feared in England was proved by the extensive measures taken by the navy for the protection of the transports. Thus from the outset of his taking over the command his actions showed the impress of the cautious leader. There was certain to be a difficulty in maintaining a steady flow of reinforcements to make up for losses. So he determined to avoid frontal attacks and to maneuver the enemy out of his positions, not, however, with the view of compelling him to fight in the open country, but only to obtain possession of the country held by the Boers. That was the distinguishing mark of the operations: the winning of positions, not the destruction of the enemy!

By a rapid flank march Lord Roberts threatened the communication of the Boers at Magersfontein; by a night march they attempted to escape; but, brought up in a very clever manner by the cavalry on the 17th February, 1900, they on the next day repulsed an attack made upon them

during the absence of Lord Roberts. Lord Roberts stopped the further carrying out of the attack, and after being surrounded and bombarded for ten days the Boers were compelled to lay down their arms. The same thing happened in the fighting at Poplar Grove on the 6th March. The enemy was held but no attack was made, in the certain expectation that he would evacuate his position during the night. It is true he did so, but only to make another stand a few miles further away.

The advance was arranged from the outset with the avowed intention of surrounding the enemy. The troops advanced with the dispositions for battle fully developed. In the advance on Diamond Hill, 11th June, 1900, Lord Roberts's force, 40,000 strong, moved forward with a broad front of about thirty miles, with an interval of between twenty and thirty paces between the skirmishers. Only against a broken enemy, who it is known will not advance to the attack, is it possible to take liberties of that kind. The idea of destroying the enemy remained quite in the background.

But what may thus have been saved in bloodshed on the day of battle was more than made up for by the sacrifice entailed through the prolongation of the war. Timidity in the face of the enemy was most apparent in Buller's actions on the Tugela. Battles which opened favorably were stopped short, partial successes not taken advantage of, only because the further attack would have become a frontal one. Nothing could be more fatal than to allow troops to believe that a frontal attack is impracticable. On the contrary, troops must learn that in great battles almost all attacks will be frontal. It must naturally be assumed that as in any other attack, fire superiority has first been established. If other methods do not suffice, there remains only what is recommended by our Drill Regulations, viz., to approach the enemy under cover of the darkness, and then at day-break reopen fire at closer ranges. This was also several times attempted in South Africa. The English army had had in peace a good training in carrying out night attacks. Bearing in mind the storming of the Egyptian lines at Tel-

el-kebir (1882) in the dusk of the morning, and the successful march to storm the Khalifa's position on the Atbara (8th April, 1898), much might well be expected from night actions. The experiences gained in 1882 were, however, forgotten, and less weight was attached to the preparations and to the acquiring all necessary information indispensable for success. Thus it came about that at Stormberg and Magersfontein the troops came on the enemy too late, and instead of taking him by surprise, were themselves surprised in close order by their opponents' fire, which wrought great havoc in their ranks. So reliance on this method of fighting died away, and the dusk was not taken advantage of, viz. : after an indecisive action, when, as we now can see, a night attack would have certainly insured victory.

It was only a small step from reluctance to making a frontal attack to the belief that it may generally be impracticable. Major Baden-Powell lays down the close connection of the *operative offensive* with the *tactical defensive* as a fundamental principle.* But only under particularly favorable circumstances does he consider that a frontal attack can be carried out. But the South African War shows plainly that whoever wishes to obtain a decisive result must press the attack home in spite of all difficulties. Only the attacker can use to good effect the shortcomings and blunders of the enemy. Whoever plans in advance merely the warding off of attack and a system of defense has already recognized the superiority of the enemy before the decisive blow is struck.

If weakly held positions could not be taken by numerically superior forces, it must be attributed to the faults committed by the English. This disparity between attacker and defender was apparent both in earlier wars, and to a greater extent in South Africa; the more inadequate the cooperation of the artillery, the less protection the nature of the country offers, the more difficult will envelopment become. But a skillful and energetic leadership has even in South Africa been victorious without a great superiority.

*"War in Practice." By Major B. F. S. Baden-Powell, Scots Guards.

Without doubt the attack has become more difficult and more costly for infantry. The troops can only respond to the demand made upon them if they find a support in the inflexible will of the leader who is determined to win in spite of all difficulties.

All half measures, then, are fatal. Our attacks will be bloody, but they will not exact greater sacrifices from us than Frederick the Great demanded from his infantry in all his serious battles. Because the expectation of incurring heavy loss restrained a leader from attacking; because, owing to the dislike of the Boers to hand-to-hand fighting, it was nearly always possible to maneuver them out of their positions; because an attack already begun was not pushed home, it need not be inferred that a frontal attack is generally impracticable. The South African War only confirms the lessons of earlier wars:

1. That the attacker, generally speaking, should have the superiority, the great advantage of which shows itself in the power to envelop.

2. That every well-prepared attack, which is founded upon the principle of fire superiority, must succeed. (Elandslaagte, Driefontein.)

3. That the supposed dictum as to the impracticability of frontal attacks is one that cannot be sustained.

4. That the troops must, under cover of the darkness, win what remained unattained during the day. (Modder River, Spion Kop, Paardeberg.)

“What form now does the infantry attack take, after the previous lessons have been turned to account; what can we learn therefrom for the advance over level country, if we have nothing to suffer from the enemy’s artillery?”

The English infantry was surprised by the enemy’s fire at Magersfontein and Colenso in close formation, at Belmont and the Modder River in battle formation. In order to avoid similar experience, a new fighting formation at ample distance from the enemy—about eight miles at Poplar Grove, for example—was adopted, which permitted only of movement straight forward; an advance in such a formation was only possible where the veldt offered no obstacles and the

important question was to hold the enemy. The brigades formed with their four battalions a sort of open double column, with an interval of between three and four hundred yards between the battalions. The battalions opened their columns in such a way that their eight companies, each in a thin line, with at first two paces interval between the men, which was finally increased to twenty, followed with an interval of from a hundred to one hundred and twenty paces.

The advantages of the deep formation, and of having the troops well in hand, so that they could also be used for other purposes than a purely frontal one, disappeared. As the brigades advanced in complete fighting formation, the cursory information obtained by the cavalry tumbling against the enemy's positions sufficed. But such a method must form the exception. For serious attack such scouting would not, however, suffice. Out-pickets may be able to prevent approach, while foot patrols, turning the slight cover of the ground to the best advantage, may be able so far to approach the position that they can make out details. This method was almost always neglected by the English, although the necessity for a more accurate scouting both for infantry and cavalry repeatedly showed itself. Here infantry officers' patrols must do the work, who, ensconcing themselves under cover before the position, must examine the country with good glasses, calculate distances, and signal their observations by means of flags. By such so-called patrol groups the advance of their own infantry under fire, even over wide distances, can be assisted.

When the position of the enemy is approximately ascertained, a further extension of the fighting line takes place. On the 18th February, at Paardeberg, four out of the five battalions of the Sixth Division were at once moved up into the firing-line. Each battalion of eight companies occupied a front of from 400 to 500 yards, formed in three lines, of which the first two were in skirmishing order, with intervals of about two yards; the third line consisted of two or three companies in close order. The whole front of the four battalions covered more than 2,000 yards.

The Highland Brigade, on the right of the Sixth Division, went, however, further in the extension of their fighting front. Towards 7 A. M. they broke up their bivouac east of Paardeberg Drift, and advanced in an easterly direction, the Argyll and Sutherland Highlanders leading, followed by the Black Watch and the Seafortths, at a distance of some 2,500 yards from the enemy's front, in long ranks one behind the other, with four paces interval between the men, until the head of the Argyll and Sutherland Highlanders had arrived level with the artillery on Gun Hill, behind the left wing of the Sixth Division. Here, after turning left about, the whole brigade, except two companies of Seafortths, who followed behind the left wing, advanced over the open plain towards the river in an extended, weak skirmishing line, with a front of more than 4,000 yards without supports and reserves. The English, without doubt, went too far in broadening their front; but the new weapons undoubtedly permit an extension of space in the attack of single units, which, however, must be less than in the defense.

In possession of a long range weapon, fitted with a convenient, long-distance sighting arrangement, the English infantry allowed themselves to be enticed, by the distant fire of the Boers at ranges from 1,200 to 1,300 yards (the Guards at Modder River), even 1,600 to 1,700 yards (Sixth Division at Paardeberg), into opening fire on the enemy, whose position could not be detected even with the most powerful glasses.

The complaints, recurring again and again in all reports, that it was almost impossible to discover the enemy, who lay motionless behind their cover, shows the necessity of training the eyesight of officers and men in detecting difficult objects at medium and distant ranges. The battles in South Africa confirm the old rule that if an attacker has once opened fire at long range, he generally does not get within close range. At once to throw oneself down to return it, when the enemy opens fire, shows how fatal peace training is. The losses were in any case small, certainly not in any way comparable to those suffered by our Guard in the advance against St. Privat through the effects of the Chassepot fire,

without being able to return it. Small losses must be borne, until heavier losses make it necessary to open fire with individual units, in order to make the further advance of the main force possible.

Just for these duties machine guns have shown themselves very useful. Every English battalion had one of these weapons. Whilst in the Soudan these guns were used as batteries against the dense masses of the Dervishes, in South Africa they were used with the battalions. Often there was no opportunity for using them, which was left to the discretion of the commanding officer. When attacking it was difficult to get the weapons on the carriages on which they were mounted forward, as they offered a mark like a gun. It was not without reason that an officer said: "It was as if their outward appearance had made leaders and men alike forget that they had in their hands a weapon of the limited efficiency of these guns." As the Boers never offered good targets for machine gun fire, the troops were dissatisfied with the effect they produced. In the attack on Talana Hill a machine gun proved very effective in a small wood behind a wall; in open country the guns were, however, very quickly silenced. This, for example, happened at the Modder River to the Scots Guards' gun at 900 yards, at Magersfontein to the Seaforths' at 600 yards, also at Rietfontein on the 26th October, 1899, the Gloucesters' guns at about 900 yards.

Wherever the attempt was made, the English infantry in their skirmishing lines were able to advance with only small loss to a distance of between 700 and 800 yards from the enemy; then, however, these thin firing-lines undoubtedly showed themselves much too weak, either to advance further or to gain undisputed fire superiority. The new English regulations therefore lay down that in their skirmishing lines, with intervals of six to twenty paces, when a distance of 600 yards from the enemy is reached, the line is then to be brought up to full strength, that is, a man to every yard. It is considered an advantage of thin skirmishing lines that they suffer less from fire, that each man has greater freedom of movement, that they are more difficult to locate, that pre-

sumably the enemy will also open fire upon them later. But certainly there is some ground for stress being laid upon the fact, that a man's sense of duty, when in the thin firing line he suddenly finds himself exposed to danger, wavers sooner than when he sees his comrade close to him in the same action.

The question whether on principle thin or close skirmishing lines are to be employed does not permit of a definite answer. Our duty must be to bring into position a firing-line superior to the defender's at close range. If we have to advance through country with cover, which interferes with the effectiveness of the enemy's fire, we immediately enter upon the decisive fighting, and we must utilize the advantage of a uniform bringing up of skirmishing lines possessing fire superiority; if we have to advance over open country nothing remains but to move forward with thin lines, gradually strengthening them to the fullest extent. Stress has been laid upon the point that in this advance in several lines, one behind the other, the units will get mixed, and that also the rear lines might fire upon the advanced ones. The first point must be conceded; the second, at least as demonstrated by the war in South Africa, affords no ground for apprehension.

Doubts have also been expressed whether the reinforcements can reach the firing-line. The war in South Africa proves this. At Magersfontein the Highland Brigade, holding on to their close-range positions, were reinforced by a battalion which advanced by rushes and even succeeded in gaining another stage in advance; at Paardeberg a half-battalion of the Cornwall Regiment were equally successful, reaching the firing line partly by creeping and partly by rushes. In general, it is recommended that the reinforcements be brought up by rushes to about 200 yards from the firing-line, the last stretch to be crossed by the men creeping, as soon as they arrive within the fire zone directed against the skirmishing line. At what distances the principal fire position will lie depends upon the nature of the ground and the results of its examination, as well as upon the efficiency of the enemy's artillery. The attack to-day consists, above

everything, in winning fire positions. Every precipitate advance from these, if the fire of the defenders is not yet weakened, may even lead to the destruction of the attacker. This struggle with all its disappointments and repulses, may last for hours, and even throughout an entire day. The attacker will be forced to try and adapt himself to the tactics of the defense, and he may even, under some circumstances, have to entrench himself. Thus the chances of the attack and defense are gradually more and more equalizing themselves, although it is certain that as the battle progresses, the moral superiority of the advancing attacker will increase proportionately as the defender on his part begins to bleed to exhaustion.

When once the fire of the defender has been weakened the further progress of the attack must vary according to circumstances. The view has been chiefly held that the best method of advance is by rushes by companies, as soon as reinforcements have reached the firing-line.*

But these reinforcements, having worked themselves forward into the enemy's fire without firing a shot, would plainly be glad to be able at least to open fire. Were the strengthened line now to spring up, a heavy fire would be directed against them, which would soon compel them to throw themselves down again. If a rush is to succeed, the fire must first have been effective for some time; all regularity of movement must be discarded.

The section leaders must independently take advantage of every opportunity to bring their men closer to the enemy. It is just in this that English officers so often failed. Any preparation taking time, which the simultaneous rush for-

*In the "Militärischen Betrachtungen über den Krieg in Sudafrica" (Beiheft 8, *Militär-Wochenblatt*, 1900), the following observations occur: "The men do not all rise together; this gives a watchful enemy time enough to greet those who get up last with a well directed fire. Accordingly, even short rushes with long lines become too costly to be carried out for any length of time. Small groups, on the other hand, can be put in movement almost immediately, and surprise, in my opinion, is the only thing that can guarantee a rush success. For this reason it should only last as long as the surprise. Everything likely to attract the attention of the enemy by a sudden cessation of fire must, therefore, be carefully avoided. And this is alone possible with small groups."

ward of long lines especially calls for, is, as it attracts the attention of the enemy, bad. Quick as lightning must the springing up from the ground and the rush forward follow each other; whether the men move with their breech-blocks open, with loaded or unloaded weapons, is immaterial. In the rush forward the men are generally too much out of breath to shoot immediately; rapidity of movement is the main thing.

Indeed, in the Franco German War we experienced increasing difficulty with each rush in making the men rise quickly and carry their rush forward far enough. English officers fully bear me out. It is obvious that on principle the rushes must be as long as possible, so as not to have to repeat oftener than necessary what is the critical and the most difficult moment to be got over. This is the view taken up by the new Austrian and English Regulations. The extent of the rush is limited by the staying powers of the men and by the enemy's fire. It will be easier to shorten the rushes than to prolong the short ones to which the men have been trained. If under favorable circumstances a rush can be some eighty yards long, it will come down to forty yards or even less at close ranges. It is of decisive importance for the length of the rush, whether the losses occur when the men rise from cover or whether during the rush itself. In the first case there will often be no rush forward at all, or the men will throw themselves again to the ground after ten or fifteen yards.

This small success in winning ground does not compensate for the waste of moral strength in making the men get up quickly. Creeping forward, however, comes quite naturally in the field; the men get over the ground more quickly, with fewer losses and without great fatigue. The difficulty of getting troops to storm under these conditions is not experienced. In the open country this creeping forward was carried out in spite of a steady fire. English officers assert that it is practicable to support these units while they are creeping forward by firing over their heads.

The Boers in this way often succeeded in driving the already disorganized enemy out of their positions by means

of their rifle fire. The firing line, continually firing, crept forward slowly and steadily in a way which is said to have exerted upon the defenders, who were tied to their positions, an impression all the more disquieting and paralyzing the nearer the uncanny, creeping, firing, serpent-like line approached them, and the less they were in position to inflict perceptible losses on these small prone objects, especially when they themselves were kept persistently under an effective fire.

The war shows, in opposition to the view held in our Field Service Regulations, that firing lines can lie opposed to each other at close ranges by the hour without any decisive blow being struck. English officers find an explanation, which is also confirmed by their opponents, in the circumstance that the Boers could fire at close ranges without raising their heads from cover, and only left their protecting cover if the English rose to advance. At Spion Kop the firing lines lay only about 250 yards apart from sunrise to dark.

In other cases, when the Boers had gained the fire superiority, they still waited and continued the fire. The English troops could scarcely have held the position against an advance to storm. As this did not follow—rising up and retreating was synonymous with destruction—their power of resistance relaxed during the long fire action, and in order to get out of this apparently unbearable position, which was becoming more acute every minute and paralyzing every vigorous resolve, the only possible alternative seemed to be to lay down their arms. It only needed some trifling incident to have sent them flying in wild confusion. It is just in this that the importance of the storm attack lies. An energetic enemy does not give ground to lead alone; he will not willingly expose himself to certain destruction from a pursuing fire; he needs first the advance of an attacker determined to come to hand grips to force him to evacuate his position. The attacker will advance by rushes and creeping as near as possible to the defenders; any premature forward rush, any isolated advance of single units, may jeopardize what has up to then been a success.

It is just here that disappointment over the exact effect produced by weapons is easy. The silencing or weakening of the enemy's fire gives only a deceptive check—an error which generally avenges itself by destruction. It appears to be somewhat hazardous to place the power of sending the men forward to storm in the hands of anyone, especially in those of the youngest section leader. To wait and keep up the fire is nearly always better than a premature rush forward. At Driefontein men advanced to storm when they saw some of the units break away from the firing line. At Elandslaagte, on the other hand, there was a feeling in the whole line that the decisive moment had arrived, and that they must either go forward or back.

“But how is the storming to be carried out?”

The one thing certain is that an advance without fire support is impossible unless the defender evacuates his position with the bulk of his men. For a certain time the artillery can well afford this support, but after a time it must cease, or better still, direct its fire upon the ground behind the position in order not to endanger its own infantry. Perhaps the defenders will remain under cover. But how if they rise, or how even if they only fire in a horizontal direction without rising? English attacks have failed even when the stormers had arrived within from fifty to eighty paces of their goal. The Austrian Regulations, recognizing the value of fire support, have decided that one unit should remain lying down; but this appears hazardous, when the beat of the drums and the bugle puts everyone in motion. What, then, finally, can a single unit effect, even for the front of a battalion? Are the men to throw themselves down and take up the fire combat again if the enemy opens his rapid fire? May this not be the beginning of a repulse? What will become, then, of the units which have been driven back?

This cannot be the solution. The enemy is worsted in the fire combat, that is, he attempts to protect himself against the storm of bullets and shrapnel hurtling over his cover. During this storm the enemy must be kept under cover and not permitted again to raise himself. This appears only possible through regular conventional fire carried out at the

commencement of the movement. To propose using this against an unshattered enemy under cover in order to worst him, as has been recommended several times since 1880, spells destruction. Here the question is only with regard to the further keeping in check defenders already broken. In the South African War success was several times achieved in this way.

One of the most distinguished and perhaps the best tactician of the English generals, Sir Ian Hamilton, who led his troops against the enemy at Elandslaagte and Doornkop, wrote to me as follows on this question: "My view is, that no matter what regulations are laid down in peace, men will fire when advancing to storm. Nothing will stop them; they rely upon it. It is as well, then, to count upon it in advance. The greatest danger is that the men will throw themselves down instead of continuing to advance. When stormers once lie down, they only get up to retreat."

The views of English officers, who are most experienced in war, certainly deserve consideration.*

*Von der Goltz writes in his "Training of Infantry for Attack": "The nearer the line approaches the defenders, all the more does the inherent effort of everyone show itself, to reach the enemy's position as rapidly as possible; from lying down to shoot comes the kneeling, then the standing to fire, and finally quite naturally follows firing while moving. Firing when in movement is permitted by the regulations, and is certainly ordered in these circumstances. There arises here a very natural feeling not to allow the enemy who is kept lying down to get up again. This fire when moving must not be confused with the former firing in movement of long lines of skirmishers at distant ranges, which was condemned in its day, and by which the keeping down of a worsted enemy, was not intended, but the overthrow of an intact one."

GENERAL FRENCH'S CAVALRY CHARGE AT KLIP DRIFT.

[The following inspiring account of the brilliant and successful charge of French's cavalry division at Klip Drift is taken from Colonel Waters's translation of "The German Official Account of the War in South Africa." This charge occurred in the advance of Lord Roberts's column for the relief of Kimberly in February, 1900. French's cavalry had marched in advance and seized Klip Drift on the Modder River on the 14th of February, and held it till the arrival of General Kitchener early on the morning of the 15th with the Sixth Division (infantry).—EDITOR.]

GENERAL FRENCH intended to continue his advance for the relief of Kimberly early on February 15th, in order, if possible, to reach that town on the same evening; but the Boers had blocked the road during the night, a detachment, about 900 strong with three Krupp guns, having occupied the kopjes north of Klip Drift in a semi-circle about two and a half miles in extent. Somewhere about the center of the Boer position there was a col 1,200 to 1,300 yards wide, which connected two neighboring kopjes, and the ground sloped gently up from the river. This col was within effective range of the Boers ensconced on both the kopjes, the three Krupp guns being on the western hill.

After the Sixth Division had occupied the position on the heights between the two drifts, where the cavalry had been, the latter assembled about 8:30 A. M. at Klip Drift. The patrols soon succeeded in ascertaining the strength and the extent of the enemy's position, because the Boers, contrary to their usual custom, opened fire on them at long range, and so disclosed their whereabouts. In consequence of the reports sent in, French ordered his batteries of horse artillery, which were soon afterward joined by two batteries of the Sixth Division, and two twelve-pounder naval guns, to come into action on the heights on the north bank. Supported by the fire of his guns, he intended to break through the center of the enemy's position. The artillery opened

fire at about 2,200 yards range, spreading it along the entire Boer position, and it soon succeeded in silencing the three hostile guns. Simultaneously with the opening of the artillery fire, the infantry of the Sixth Division advanced north of the river against the Boers on the high ground.

The hour was just after 9 A. M. French assembled his three brigadiers, informed them of his intention, and ordered Gordon's brigade with its two batteries of horse artillery to form the first line, with four yards interval between each two men, and to break through, across the col in the direction of Kimberly. The Second Brigade, under Broadwood, was to follow in support in line at 500 yards distance, while the First Brigade, under Porter, together with the remaining five batteries of horse artillery, which were to continue firing until the last possible moment, was to form the third line.

The two leading brigades at once deployed, and the horsemen, who were soon veiled in dense clouds of dust, dashed into the enemy's fire, the divisional general riding at the head of the Second Brigade. The spectacle displayed to the eyes of the Sixth Division was magnificent; every man held his breath; the moment was one of extreme tension, for it seemed as if the bold attempt must be utter destruction of the gallant riders. It had, however, already succeeded before the spectators were really able to appreciate the fact. After the dense clouds of dust, caused by the 6,000 horses, had somewhat dispersed, the three brigades were seen to rally nearly a mile beyond the enemy's position, and the road to Kimberly was open. It was marvelous that the division should have ridden almost without loss through the Boer fire; the casualties amounted to only one officer, and fifteen men killed and wounded, together with about twenty horses. This remarkably small loss is explained chiefly by the great rapidity of the maneuver, which completely surprised the adversary. The impression caused by the dashing mass of horsemen was such that some of the Boers took flight before the cavalry had approached within effective rifle range. Those of the enemy who held their ground fired for the most part too high in their excitement,

especially as they had occupied, contrary to their usual custom, the summit of the heights and not their foot. The cavalry too were enveloped in such dense clouds of dust that they offered no certain target. The effective preparation and support of the attack by the artillery, contributed, also, greatly to its success, and one of the Boers present stated that "the fire from the English guns was such that we were scarcely able to shoot at all at the advancing cavalry." The main body of the Boers, leaving fifteen killed and wounded, fled towards Magersfontein, and their terror was such that, by their exaggerated accounts, they communicated their dejected spirits to other burghers in the laager. A number of Boers, unable to get their horses in time, had surrendered. A British officer described his impressions in the following language:

"The enterprise appeared to us at first as quite hopeless; we believed that only a few of us could come out of it alive, and, had we made a similar attack at Aldershot, we should certainly have all been put out of action, and have been looked upon as idiots. When we had galloped about a quarter of a mile, we received a very hot frontal and flanking fire, and I looked along the ranks expecting to see the men falling in masses; but I saw no one come down, although the rifle-fire was crackling all around us. The feeling was wonderfully exciting, just as in a good run to hounds."

This charge of French's cavalry division was one of the most remarkable phenomena of the war; it was the first and last occasion during the entire campaign that infantry was attacked by so large a body of cavalry, and its staggering success shows that, in future wars, the charge of great masses will be by no means a hopeless undertaking even against troops armed with modern rifles, although it must not be forgotten that there is a difference between charging strong infantry in front, and breaking through small and isolated groups of skirmishers.



THE JOURNAL OF THE U. S. INFANTRY ASSOCIATION.

By virtue of an arrangement with the Infantry Association, its *Journal* will hereafter be furnished members of the Cavalry Association at \$1.00 per annum. Under like terms the CAVALRY JOURNAL will be furnished to members of the Infantry Association. Members of the Cavalry Association desiring to take advantage of this club rate will please to remit the additional fee to the Treasurer of the Cavalry Association, who will have the *Infantry Journal* mailed to them.

This arrangement has been entered into to facilitate and encourage a study of the tactical use of the two arms combined in war, and to enlarge the usefulness of the two Associations in disseminating professional knowledge throughout the army.

WHY NO "COMMENTS?"

Has the sword actually become mightier than the pen in our cavalry, or is it that the book and the study thereof have driven both from the field? We are seeking the reason of the rest or rather the arrest of the cavalry pen. The Cavalry Association, which is the cavalry of our service, wants to hear from its members, and the pages of its JOURNAL are its chosen medium. There are no elect few to whom its pages are open—it belongs to all alike. Whenever one of us conceives that he has anything professional worth saying to his fellow cavalrymen—and such a feeling comes to everyone of us at some time or other, no matter how modest may be his mould—he has the JOURNAL at his command to say it in.

The service misses the "comments" which used to be such an interesting feature of the JOURNAL. Is it to be inferred that we have attained that millennial state of subordination and discipline among us which enables us to read article after article in the JOURNAL without having now and then aroused within us the spirit of disputation? Or is it that our garrison school work so absorbs our time that we have none left for writing our views on any subject through the JOURNAL? Or is it that we have no time even to read the papers in the JOURNAL?

The JOURNAL hopes to reap a harvest from the War Department order requiring that essays shall be submitted in the post-graduate course of the garrison school. The editor requests that copies of such essays may be mailed to him with permission to use them in the JOURNAL.

THE MILITARY SERVICE INSTITUTION.

The editor of the *Journal of the Military Service Institution* is to be thanked for the general index which he has just issued, and he and his able assistant, Captain Thomas A. Roberts, Seventh Cavalry, are to be congratulated upon the excellence of their work. Too much praise cannot be bestowed. It was a large undertaking. The form of the work, its style, its convenient arrangement, its scope, the soft dead white of its pages and the clear black print of its type, all appeal to one.

In glancing through this index, one who has not kept steady pace with the progress of the Military Service Institution, is struck with the array of professional subjects that have been discussed in the pages of its *Journal*, and one has but to look over the index of authors (Captain Roberts's part of the task) to be convinced that most of the subjects have been ably treated, for in that list we find the names of most of the officers of our service—not all of them by any means—that have distinguished themselves as writers or otherwise since the Civil War.

And in looking over this index one cannot but be reminded, if one needs to be reminded, of the vast good the

Military Service Institution has done for our service. When, on that day in 1877, General Stanley, General Fry, General Rodenbough and Colonel Lieber issued the circular upon which the Institution was founded, they laid the corner stone upon which has been builded all the professional culture existent among us to-day. And there is professional culture in our army, more and of a higher grade, taking it as a whole, than there is in any other army in the world. And there ought to be. And it dates back to the founding of the Military Service Institution. All the other agents of our culture have followed in natural order, the Service School at Fort Leavenworth, the Cavalry, Infantry and Artillery Associations, each with its Journal, the Lyceum, the examinations for promotion, etc.

But the professional culture of our officers has not been the only aim or the only achievement of the Military Service Institution; its field has been even broader; its purpose has been the general improvement of the military service of the Nation, not alone of the Regular Army but of the National Guard also. Scarcely a reform, scarcely a change for the better, has been wrought in the service within the last quarter century, but has been first suggested in the pages of its *Journal*.

Few of these changes have originated at the War Department, but, thanks to those in authority there, they have been read of in the pages of the *Journal of the Military Service Institution* and put into effect. And through the War Department the influence of this Institution has reached the halls of Congress.

The Institution and its *Journal* are a quarter of a century old this year. Long may they live, and ever wax stronger in influence and numbers—the Institution in the number of its members and the *Journal* in the number of its readers and contributors.

Every officer of the army ought to be a member of the Military Service Institution.

FORAGE ALLOWANCE FOR INFANTRY OFFICERS.

Horsemanship is an accomplishment, it is not a natural gift. It must also be acquired in one's youth. One may have a knack at learning to ride, as one may have a knack at learning languages, but one can no more ride without learning to do so, than one can speak French without learning the language. And one can no more learn to ride by walking a half-century, than one can learn to speak French by talking English for a lifetime.

All this is said by way of inviting attention to the Government's inconsistency in expecting its infantry officers suddenly to become horsemen upon their promotion to majority, or appointment to the staff, without having given them the opportunity or encouragement to acquire the art of horsemanship. By act of Congress they become mounted officers in name, but, unless they have, at their own personal expense and under every sort of discouragement and inconvenience, kept horses during the long years that they have served as company officers, they come into their promotion certainly lacking a knowledge of the art which gives the office its distinctive name.

They ought to be horsemen in fact, as well as mounted officers in name; and they ought to be encouraged by the Government to become, and to continue to be, horsemen. The little knowledge of horsemanship one acquires at the Military Academy, good as it is for a foundation, cannot last a lifetime—cannot last a quarter of a century—unless it be kept alive by practice. And a large proportion of our infantry field-officers have not had even the advantage of that short course of training. To be sure, most efficient infantry officers, while in their junior grades, serve in one or more of the regimental staff positions which entitle them, for the time being, to keep their mounts; but this is not enough. To be a good rider one must ride habitually, and the mounted officer that is not a good rider lacks just so much in efficiency. Every bit of attention that a major has to devote to his personal safety in the saddle, is just that much attention taken off his battalion.

Many infantry officers, we may say most of them, a large part of the time, in the face of all discouragement, keep horses and buy forage for them. They have no stables, but must find an old shed here or there to put their horses in, or beg a stall in a troop or quartermaster's stable. This is not as it should be. The Government ought to find the forage and provide stable-room for at least one horse for every infantry officer. It would make for efficiency, and it would be a small price to pay. And it would be fair to the infantry officer. It would not be expecting the field and the staff officer of infantry to be what he has had scant chance to become—a horseman.

THE NEED OF STAFF TRAINING.

We are fortunate in being permitted to include in this number of the JOURNAL the remarks made by Major Swift, instructor of military art, at the opening of the first term of the Infantry and Cavalry School and Staff College.

The following letter, which is also reproduced by permission, expresses the appreciation of a distinguished Confederate general and accomplished staff officer :

"SOUTH ISLAND, S. C., November 4, 1904.

"My Dear General Bell:

"I have just finished reading the admirable "Remarks" by Major Eben Swift, introductory to your course at the Staff College, of which you kindly sent me a copy; and I cannot refrain from thanking you for it and expressing my very warm appreciation of their value and suggestiveness. When I picture to myself an army with a staff trained in the course he sketches, I indeed seem to see the dawning of a great day for the Nation. At last the lesson is being learned that the organization and handling of armies is a great and complex art. I believe it is perhaps the greatest and most complex of *all* arts. And it demands long study and training, not only at the head of the army, but throughout the staff of every organization in the army.

"In our Confederate army our staffs were often filled, from top to bottom, for sentimental reasons. Anybody would do for a staff officer. Sometimes even our best generals had but vague appreciation of the situation. There

were, indeed, many cases where men without previous training developed marvelous efficiency; but there were too many who fell far short. For instance, read the official reports of Malvern Hill by Lee's chief of artillery and by the Federal chief, and note the contrast. Yet the Confederate chief was retained to the close of the war.

"Really, the *raison d'être* of the book I have been trying to write for many years has been just to point out lessons teaching the necessity of staff training and attention to matters of smallest detail.

"Very sincerely yours, E. P. ALEXANDER."

ONE YEAR REËNLISTMENTS.

Old soldiers are what we miss most in our ranks to-day, and we use the adjective "old" in a very limited sense, meaning soldiers in a third or a second term of enlistment. No doubt it is a sign of prosperity in the land and a recognition of the excellence of training a man receives in our troops and companies. Corporations and individuals requiring trustworthy employees are on the lookout for discharged soldiers who can show a discharge certificate with the word "excellent" written on its face. Especially are such men wanted to fill positions requiring the management of groups of men.

Much as every troop commander desires to see his men better their condition, he cannot but regret the loss of every good man that quits his troop. He wishes above all, sometimes he hopes, and, if he has not lost faith through disappointment, he may even pray, that Congress would increase the pay of the noncommissioned officers to such a figure that every good soldier would strive for chevrons and cling to them when he got them.

But there is another thing Congress could do which might afford our troops some relief in this matter, namely, authorize reënlistments for a term of one year. If such a law could be passed and no soldiers took advantage of it, nothing would be gained to the service or lost to the Government. But some soldiers would surely take advantage of it, and in every such reënlistment the troop would gain a

trained and useful soldier instead of an untrained and (for many weeks) useless recruit, and the Government would save the expense of his recruitment.

Many a soldier at the end of his term would be willing to "take on" again for another year in his troop, especially if he be a noncommissioned officer; while he feels that he is not willing to enter into another contract for three years, until he has gone out and tried his chance in civil life.

But such a short term should only hold for reënlistments in a soldier's own troop. The discharged soldier should not be allowed to reënlist for a single year in any other troop or company than the one from which he was discharged; and the reënlistment should be made only upon the day following his discharge. A different rule would only encourage the spirit of change which already exists too largely in our ranks.

And further to encourage reënlistments, the Regulations might provide that every soldier upon reënlistment should be granted a furlough which, considered with what furlough he had received during his former term, would amount to three months; such furlough to be given at such time as the soldier desired it, provided his services could be spared.

One-year reënlistments with the additional provision that a soldier taking advantage of it in the Philippines should not thereby lose his travel allowance, would, it is believed, lessen the number of discharges in those islands, and do away with the necessity for transferring so many men from regiments about to start for service across the seas.

OUR CAVALRY AN ORPHAN.

The trunk of an army is its infantry. Indeed the infantry is the army, inasmuch as every army must be judged by the numerical strength and the quality of its infantry. The other arms and the staff corps are merely its members.

So the head of an army is the head of its infantry. An army commander is a commander of infantry, and he should be chosen mainly for his ability to command infantry in

campaign. He must, of course, understand the coöperation of the other arms, but, if he would win victories, he will leave to the chief of artillery the conduct of his artillery, and to the chief of cavalry the employment of his cavalry. At least, he will seek the counsel of such chiefs and most likely follow it, and he will leave to each the details of his own arm.

Every branch of an army needs a head, a father, to guard its welfare, to watch over its training in peace, and to direct its employment in war. The army commander or its chief of staff can no more properly look after the details of all the staff departments and fighting branches of the army, without assistants, than the president of a great railway can manage all of its departments, without a chief at the head of each one to assist him. And there are few railways that employ a larger number of servants, or possess a more complex system than our army even at its peace minimum.

The necessity for a head to every department and branch of our army, *except its cavalry*, is recognized by our Government. The cavalry alone has no chief, and it suffers accordingly in the uniformity of methods and equality of training among its regiments, in the equity of their assignment to stations and duties, in the character of their equipment and mounts, and in other matters that affect their contentment, efficiency and effectiveness.

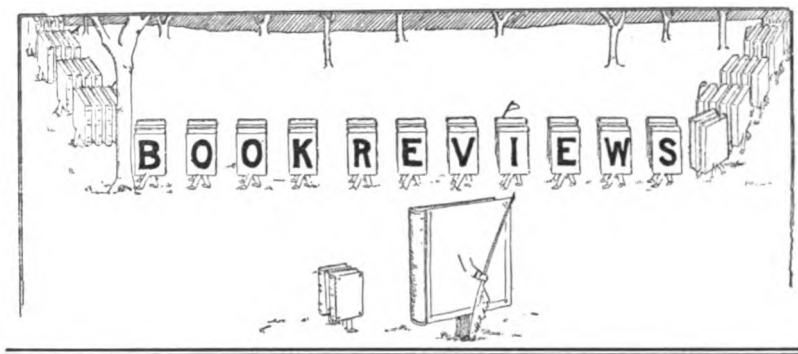
Who doubts that the Ordnance, the Quartermaster's, the Medical and other departments are better managed in every way than they would be if they had no chiefs? Even if all the supply departments should be consolidated into a single department, it cannot be doubted that each branch of it would still have its own sub-chief, and that only by such a division of the duties could efficiency be insured.

That the same is true of the line of our army cannot be doubted by anyone that has watched the change wrought in our artillery since a head was given to it. Up to that moment the artillery was a corpse. The well known affection that our last two commanding generals had for it was of no avail to quicken it. They had the rest of the army to look after; they could not give their entire time and atten-

tion to the favorite arm. But since then the artillery has not only come to life, it is the liveliest member of our military body to-day; it increases in life and efficiency with each succeeding day. And one has but to read the orders issuing nowadays from the War Department concerning it, to be persuaded that the change is mainly due to the chief.

Are we ever to have in our service a Chief of Cavalry? An officer with rank and prestige to give his entire time and thought to us only? Whose advice will be asked and listened to at the War Department? Whose judgment in cavalry matters will be depended upon? Whose decisions will be accepted? Who will sit at the seats of the mighty and relieve the Chief of Staff of the infinite details concerning us? Who will be a father to us? Or are we always going to be an orphan?

All that lacks is the creation of the office. Right men for the office are not far to seek either among our general officers or our cavalry field-officers. It would only be a question of election.



**Guerrilla or
Partisan
Warfare.***

Mr. T. Miller Maguire, M. A. L. L. D., Inner Temple, Barrister-at-Law, who has seen field service with British troops and feels deep interest in military affairs, has written a little book that may be read with interest and profit. Its title, "Guerrilla or Partisan Warfare," while fairly indicating the purpose and scope of the work, is not respected so strictly that other valuable matter of collateral bearing is wholly excluded.

At the beginning, the author expresses surprise "that before the late war in South Africa, the operations of guerillas were not a part of the curriculum for the education of military officers in England" and that "in January, 1900, there was not one work on the subject in any London shop." By guerilla wars, he means "small wars, wars the leaders of which only had command of a few thousand men at a time; wars in which artillery did not play a leading part; and guerilla warfare in the bush and desert, and guerilla warfare in mountainous districts."

Of this kind of warfare, we may remark, both England and the United States have had much, and their military

*"GUERRILLA OR PARTISAN WARFARE. By T. Miller Maguire, M. A. L. L. D., Inner Temple, Barrister-at-Law. Hugh Rees, Ltd., London, Publishers.

history, if not text books, their experience, if not their curricula, make it tolerably familiar.

"The difference between partisan and guerilla warfare," says he, "is easier to describe than to define. A partisan—a *partida*, the leader of a parti—is a person in charge of a limited number of troops, whose operations are ancillary to the main operations, and yet, who does not occupy the position of a detaining force." In illustration, Stuart's, Forrest's, Morgan's, Mosby's and Stoneman's operations are cited, "whose object was to assist the general operations by distressing the enemy, perplexing the enemy, ruining the lines of communications of the enemy, and taking the supplies of the enemy."

"The destruction of railways, viaducts, bridges, is an important part of the duties of modern partisan troops." Quoting General H. W. Slocum as to the best method of destroying railway tracks, and as to the value of an efficient corps of foragers, known in Sherman's army as "bummers," Mr. Maguire in a foot-note declares: "No such foragers would be tolerated in France or Germany, or even in Manchuria."

The value of partisans in great wars may be seen from the following: "Four hundred and fifty thousand infantry, 50,000 cavalry, and 1,600 guns, were not enough in 1871 to hold down the French, who, though their "regular army was utterly ruined," were by the activity of their "franc-tireurs and other guerillas," enabled to force the Germans to use an additional "150,000 infantry, 6,000 cavalry, and eighty guns, to protect the railway that formed their principal line of communication." A similar task for similar reasons "was imposed on the 400,000 British soldiers in South Africa."

Still further illustration is discovered in the reduction of La Vendée: "Hoche conceived an ingenious mode of reducing the country, without laying it waste, by depriving it of its arms, and taking part of its produce for the supply of the republican army. In the first place he established some entrenched camps. He then formed a circular line, supported by the Sèvre and the Loire, so as progressively to coop in the whole country. This line was composed of very strong

posts communicating with each other by patrols in such a manner as to leave no free space by which the enemy, if at all numerous, could pass. Such methods had similar results a few years ago in South Africa. These posts were directed to occupy every township and village and to disarm the inhabitants. To accomplish this, they were to seize the cattle, which usually grazed in the common, and the corn preserved in the barns; they were also to arrest the principal inhabitants, and by no means to restore the cattle and the corn or release the persons taken as hostages, till the peasants should voluntarily surrender their arms. Now as the Vendéans were more attached to their cattle and their corn than to the Bourbons and Charette, in due time the peasants surrendered their arms." In Luzon, a like achievement, no less important and difficult, against a chief no less able and influential was accomplished by General J. F. Bell, whose measures, though generally similar to those of Hoche, were far more humanely executed.

But "limits must be set even to guerilla pertinacity; and when a man without uniform, without orders, without any connection with a regular government, and when the regular government was, properly speaking, abolished—when a man of that kind continues a war beyond reason, he then becomes to some extent an enemy of the human race." This accords with our theory and with—I was about to say practice; but experience in the Philippines makes it, at least, very doubtful whether officers will, in future, suit the practice to the theory.

As to Maxim and other machine guns: "That such light and handy and multiple guns are of inestimable value in trackless deserts against a foe ill-armed with artillery, or with no artillery, will scarcely be disputed."

When after Joubert's death, Botha was raised to chief command, "he was not ambitious to command masses of troops, but let the Boers fight in their own way with small flying columns, which appeared unexpectedly here and there, and were everywhere and nowhere at once. During the next few months, the English not only suffered considerable losses of men, but were placed at a serious disadvantage by

the erroneous waste of horses. The English cavalry were kept so constantly on the alert by the activity of these small parties of Boers, that the horses died by hundreds from overwork and from want of food and water."

The Cossacks "are the beau-ideal of partisan warriors. In April, 1899, the Emperor approved of new regulations for the action of Cossacks when in 'lava.' 'The "lava,"' wrote General Krasnov, 'is not, properly speaking, a formation of maneuvers; it is the whole tactical system of the Cossacks, and its form varies with each case. It is combat on horseback in open order, leaving to each man his individual initiative, and to each leader the means of profiting by all the favorable chances of the combat. Thanks to the intervals between the horsemen, the latter can move with rapidity over all sorts of ground, and cross obstacles as easily as if they were alone. They were very skillful in single combat, which was favored by their open order of formation; but they were always supported by bodies in close order. It was this formation, which was taken from the Tartar cavalry and called 'lava,' which enabled the Cossacks to weaken the enemy by isolated actions, and then to fall upon him in close order, so as to strike a great blow.'" All cavalry officers should study the "lava."

"Officers should constantly meditate on ruses, stratagems, ambuscades, and surprises. Hannibal was a master of this subject. Ample collections of *ruses de guerre* exist in French, and in the records of the American Civil War, especially in the lives of Stuart, Mosby, Morgan and other partisan leaders. Colonel Pilcher's little book 'Some Lessons from the Boer War,' just published, contains some excellent lessons in this branch of tactics."

The author's ideas on cavalry derived from the Boer War, are interesting:

"In the future a cavalry detachment, well trained with rifle, will probably often succeed in repulsing a superior force, and thus achieve a result which it could not have gained by ordinary cavalry tactics. This shows how important it is to give the cavalry soldier a good infantry training. I think it perhaps superfluous to draw attention to our

absolute unpreparedness with regard to horses in this war. The prevailing idea was either that we should never be called on to fight in a place where a preponderance of mounted men was necessary, or that our proportion of mounted men was sufficient. Be that as it may, we tumbled into a war where a man once mounted was five times as valuable as a man who had no horse.

"The Dutchman has an excellent way of teaching a horse not to stumble into holes. It is as follows: He finds a place where there is a good nest of holes, and he puts a native on the horse and lunges him around over the holes so as to train him not to put his foot into them. I think that perhaps the training of our troop horse is not that which makes him look out sufficiently for holes and bad ground; the more they are ridden over rough ground the better it is for the men who ride them when it comes to war."

Between regular and guerilla warfare important differences are noted:

"The strategical conditions are not reciprocal, and are against the regular invader, as the savage or irregular is not troubled about his lines of communication.

"Observe the swelling or contracting of savage forces, according to failure or success of invader.

"The subaltern officers were formerly of a higher standard of efficiency, relatively, than in regular warfare, but this condition is rapidly changing with the growing importance of individual efficiency in all wars. Still there is much more freedom and latitude of movement for subordinates.

"Savages are masters of surprises, and yet are taken aback by ambuscades and surprises applied to themselves.

"Reserves are not very much required for battles; but the flanks and rear are in constant danger on the march and in the battle.

"Attack early; savages and irregulars are not vigilant at dawn.

"Guns and cavalry produce an enormous moral effect in these wars.

"There is a danger of rushes by day and by night.

"The more irregular and desultory the campaign, the more important is the service of security.

"Attack and not defense is the first principle for regulars in small and irregular wars; but all isolated forces must be well protected, and have clear fields of fire, with flanking positions and obstacles."

The following arouses thought and sounds a warning :

“The natural man—the dweller in the hills and plains as distinguished from the product of the factory or large towns—has other qualifications besides eyesight and wood-craft which make him an ideal recruit. He can usually do with less food than his civilized brother; he will exercise greater frugality and economy with regard to what he obtains; he is an adept at cooking and preparing an impromptu meal; he knows where and how to obtain food if there is any to be had in the country; and he can usually manage to carry it with him in small compass. He is comparatively little affected by heat or cold; he can sleep as soundly on the ground as in bed; he is not often ill, and when he has slight ailments or has met with minor accidents, knows how to treat himself, and requires no medical advice. In a word, he is tougher, harder, more enduring than his more civilized brother, just as it is natural his mode of life should render him. In everything except discipline and armament he is, as a rule, superior to the man he has to fight.

“But now the growth of trade-routes and facilities of communication are rapidly taking away from us and the other civilized powers the privileges of better armaments. The possession of the newest and most perfect weapons is simply a matter of money, and the firms that turn them out will sell as freely to a savage as to the most enlightened of the world’s rulers. * * * If Fuzzy-wuzzy be, as often he is, as good a man as Tommy Atkins, or Fritz, or Jacques, and is even approximately as well armed, numerical superiority, knowledge of the country, and better health, will go a long way to redress the balance in our favor, which experience and discipline in these days of loosened fighting may produce.”

J. C. G.

Automatic Surveying Instruments.* “Automatic Surveying Instruments and Their Practical Uses on Land and Water,” written by Thomas Ferguson, member of the Shanghai Society of Engineers and Architects, is a booklet describing three automatic surveying instruments that were designed and used by the author: the pedograph, an automatic route-tracer for pedestrians; the cyclograph,

*“AUTOMATIC SURVEYING INSTRUMENTS AND THEIR PRACTICAL USES ON LAND AND WATER.” By Thomas Ferguson, member of the Shanghai Society of Engineers and Architects. John Bale Sons & Danielsson, London, Publishers.

an automatic route-tracer for vehicles; and the hodograph, an automatic register of courses and distances on water.

The pedograph and cyclograph have been reduced to commercial form and are manufactured by the *Nederlandse Instrumentenfabriek, Oude Gracht, Utrecht*, with great attention to detail and care in construction.

A review of the book must consist of a brief description of these instruments, because they are the subject-matter of the book, but it may be said, in passing, that the matter in the book is so clearly and happily expressed that there is a pleasure in its perusal that is independent of the interest awakened in the objects described.

When the reader is informed that the pedograph is a sketching board on which a little wheeled car is made to crawl around and leave behind it a trail on the paper that represents the course pursued by the pedestrian, he may be pardoned for some incredulity, but when he pursues the description further he finds that this is precisely what the pedograph will accomplish without other attention than turning a knob to keep the compass frame parallel with the needle.

The instrument is contained in a case $12 \times 12 \times 2\frac{1}{2}$ inches, and weighs $7\frac{1}{2}$ pounds. It is carried by a sling strap over the left shoulder, and hangs at the hip with the compass at the forward corner where it can be conveniently observed. When the surveyor has carried the instrument over the desired course, always keeping the compass frame oriented, he finds on the paper a trace, drawn to a known scale, of the route that he has pursued.

The cyclograph is almost as startling in its operation and results as the pedograph. In its manufactured form it is designed to be attached to the handle-bars of a bicycle. When the bicycle with this attachment is ridden or trundled over the desired course, there is developed on the sketching board, in plain view of the surveyor, a trace in ink, at any desired scale, of the route pursued. The only manipulation necessary is the turning of a knob or handle which keeps the paper on the board oriented, with its meridian lines parallel with the compass needle. At any time the surveyor

may halt, and opening a hinged window, sketch in such details along the route as may be desired. The marker always indicates on the paper the station point at which the halt is made, and the sketch is always oriented to nature. In fact, the instrument is so constructed that the paper by its horizontality and constant orientation, represents the surface of the ground, while the little wheeled marker rolling over the paper and leaving a trail of ink behind it, represents in miniature the bicycle rolling over the ground and leaving its trail in the dust. The directions and distances pursued by the bicycle are reproduced in miniature on the paper. The mere thought of an instrument that will do his work while he is riding a bicycle over the country roads should be a delight to the worried and often exasperated military sketcher.

The hodograph is a most ingenious contrivance for keeping an automatic record of courses and distances traversed by a boat, and for plotting this record when made. This instrument has not been reduced to commercial form, and the author states that for similar work in the future he would apply the principles of the cyclograph and thus obtain an actual trace of the vessel's course instead of a record of directions and distances.

All who are concerned with "field sketching," whether for military or civil purposes, will follow with great interest and pleasure the pages of this little book, and will be especially struck with the evidence of persistent trial and patient experimentation involved in the designing, development and construction of the remarkable instruments that the inventor and author describes.

In the United States, James C. H. Ferguson, 220 Market Street, San Francisco, is the agent for the manufacturers of the pedograph and cyclograph.

T. H. R.

Free Gymnastics and Light Dumb-Bell Drill.* "Free Gymnastics and Light Dumb-Bell Drill," is the title of a very interesting and valuable little book recently published by Sergeant-Major J. B. Betts, of the headquarters gymnasium, Aldershot. The system of gymnastics as outlined in this publication is very complete and somewhat of an innovation over that now in use. It is invaluable in the training and developing of the soldier, and if properly directed will enlarge and strengthen the various muscles of the trunk, neck, arms and legs, and will expand the chest, render the joints supple, and will impart to the soldier ease and steadiness of carriage, combined with strength and elasticity of movement. The mode of gymnastics, which includes turning, bending, stretching, lunging, hopping, swinging and combination of movements, is simplified by excellent illustrations, and there seems nothing difficult or severe in executing any of the exercises.

J. E. A.

Tactics for Beginners.† The first thing that strikes an American in reading this little book, is the hopeless confusion he finds in the organization, or rather lack of organization, of the British army. One finds that a company may be commanded by a captain or a major; that a battalion consists of eight companies, and is commanded by a lieutenant-colonel; that a brigade consists of four battalions, and is commanded by a major-general, etc.

The regiment finds place only in the cavalry, and it consists of three squadrons, and each squadron is composed of four troops, and contains six officers and 120 noncommissioned officers and men. One is left to guess what the rank of the squadron commander is. A battalion of mounted infantry contains only four companies.

As in other European armies the telegraph corps forms part of the engineers.

*"FREE GYMNASTICS AND LIGHT DUMB-BELL DRILL." By Sergeant-Major J. B. Betts, Headquarters Gymnasium, Aldershot. Gale & Polden, Ltd., Aldershot, Publishers.

†"TACTICS FOR BEGINNERS." By Major C. M. De Gruyther, p. s. c. Gale & Polden, Ltd., London, Publishers.

The second chapter, "On Time and Space," gives the space, intervals and distances of different units in various formations, and contains several simple but useful problems, and their solutions, in determining the length of columns on the road. It is remarked that the cavalry trot of the English is at nine miles an hour.

The third chapter, "On Outposts," covers the same ground that is usually covered in similar texts under the same heading. We find here the term "outpost companies." Two systems are mentioned: the "chain system" and the "group system." The preference is given to the latter, which consists of Cossack posts, each post composed of a noncommissioned officer and six men. Among the things laid down for a sentinel to "understand clearly," the author, like all the rest, clings to that useless anachronism, the countersign. Does anyone that has had experience in war believe that the countersign is of any practical use?

An excellent set of rules is given for the selection of an outpost line, the best of which is that "time should not be wasted in trying to find an ideal line" at the start. "Patrolling posts" are not mentioned, but we find "standing patrols," which seem to be about the same thing under a different name.

The chapter on "Marches" is an excellent one. Marches are divided into two general classes: First, those made "beyond striking distance of the enemy"; second, those made "within striking distance of the enemy." In the first "the comfort of the troops is the main consideration"; in the second "everything must be sacrificed to tactical considerations." "More depends on the time the men are under arms than on the distance traversed." A march that keeps men under arms longer than nine hours is defined as a forced march.

Napoleon, Stonewall Jackson and Lord Roberts are mentioned as commanders whose personal influence over their men had great effect on their marching powers. Jackson's march in the Shenandoah Valley in May, 1862, is quoted as one of the remarkable marches of history. The author, however, fails to note that the speed of Jackson's "foot-

cavalry" was largely due to the entire lack of packs and impedimenta.

The next two chapters treat of the advance and rear-guard, and reports. Nine important rules governing the writing of reports are given.

Chapter VII discusses the subject of the reconnaissance. The "advanced cavalry," which comes in this chapter, is as concisely treated as could be desired. A distinction is made between the "advanced squadrons" of the cavalry-screen, and the "contact squadrons." The former correspond to the "contact troops" in our text-books, while the "contact squadron is entrusted with a special mission, and acts independently under its own commander."

The entire subject of minor-tactics, beginning with out-posts and ending with patrols, occupies only 100 small pages; and yet, so full of meat are they that the "beginner" should feel after devouring them, that he has had all that is worth while on the subject.

In chapter VIII the evolution of tactics since 1866 is reviewed, and the deductions from the campaigns of '66 and '70 are summarized in twelve "lessons," while the summary of the lessons learned from the South African War embraces twenty-six headings.

Machine-guns proved so useful in this war, that since then one has been attached to each British battalion of infantry and regiment of cavalry. They are also being tried in our own service to-day. Each battalion of the Sixth Infantry has a machine-gun. However incongruous and out of place these guns appear borne along upon ugly mules at the dress parades of the regiment, they will find their place and use in any action these battalions may have the fortune to engage in.

The present campaign between Russia and Japan is mentioned, but the strict censorship maintained on either side, had made it impossible for the author to obtain data upon which to base tactical conclusions. Few trustworthy deductions will be drawn from the tactics of this war until after it shall have ended, and the reports of the various attachés shall have been published.

The chapters on cavalry and artillery contain nothing new, but the ones on infantry and "the three arms combined" are the most useful in the book, because they discuss in the light of actual experience, the formations, distances, intervals and methods of advance, etc., in the modern battle of rapid fire, flat trajectory, and smokeless powder—matters upon which all that was written before 1898 is now obsolete.

In one of these chapters, also, are stated the modern rules for the carrying out of orders, viz.:

"(a) A formal order must never be departed from either in letter or spirit, so long as the officer who issued it is present, and can see what is going on, or if he cannot see what is going on, provided that there is time to report to him without losing an opportunity or endangering the command.

"(b) A departure from either the spirit or the letter of an order is justified if the officer who assumes the responsibility is conscientiously certain that he is acting as his superior would order him to act, if he were present.

"(c) If a subordinate, in the absence of a superior neglects to depart from the letter of his orders, when such departure is clearly justified by the circumstances, and failure ensues, he will be held responsible for such failure, and the excuse that he obeyed orders will not be accepted."

These might well have been reserved for chapter XIV, whose title is "Orders." This is a good chapter though it contains nothing original. The importance of the subject, how to write field orders, seems about to have a tardy recognition in our own service. The new Field Service Regulations will have some pages concerning it, with models of such orders. And that it is high time, no one that has made a study of the subject will doubt, after reading some of the orders issued in our recent campaigns in Cuba and the Philippines, not to say at our maneuvers. The basis of this chapter of the book under review is, apparently, Major Griep-enkerl's "Letters on Applied Tactics," a book which ought to be on the shelf of every young officer.

Chapter XV gives in concise form the usual treatment of night operations.

The discussion of the attack and defense of villages contains little that is new, but strengthens the student in the

opinion that it is a waste of good infantrymen to send them against stone buildings held by the enemy, before they have been battered to pieces by artillery. Our experience with the stone building on the hill at El Caney might have been cited as an example.

In his chapter on the attack and defense of woods, and wood-fighting in general, the author draws his best lessons from American battles—lessons which the Germans failed to profit by in their campaign against the French. In this connection he says: "Cavalry as such, pure and simple, are of little use in wood fighting. * * * But cavalry trained to fight on foot, like the American cavalry in 1864, are very useful."

Rivers, defiles and convoys have been treated so often in works on tactics, that nothing which is new is left for the author to say.

The last chapter concerns "Savage Warfare," but since the author seems never to have heard of American Indians or Moros, his lessons are not specially useful to us. One characteristic that he remarks of the savages with whom British soldiers have fought is equally true of our Indians—that of seldom attacking at night.

In campaigns against savages like the Zulus, the Matabeles and the Dervishes of the Soudan, whose tactics are distinctly offensive, the author recommends a combination of the *strategical offensive* with the *tactical defensive*. But when the tribes show a reluctance to attack, it is suggested that they may be induced to do so by a retrograde movement or other stratagem calculated to raise their morale. We know that our prolonged inaction and efforts to avoid trouble with the Filipinos in 1898-1899 were interpreted by them as timidity, and were mainly what induced them to bring on hostilities. Would such a policy have worked with Chief Joseph? If General Howard had turned back some Saturday instead of halting every Sunday, would Joseph have taken up the pursuit and attacked?

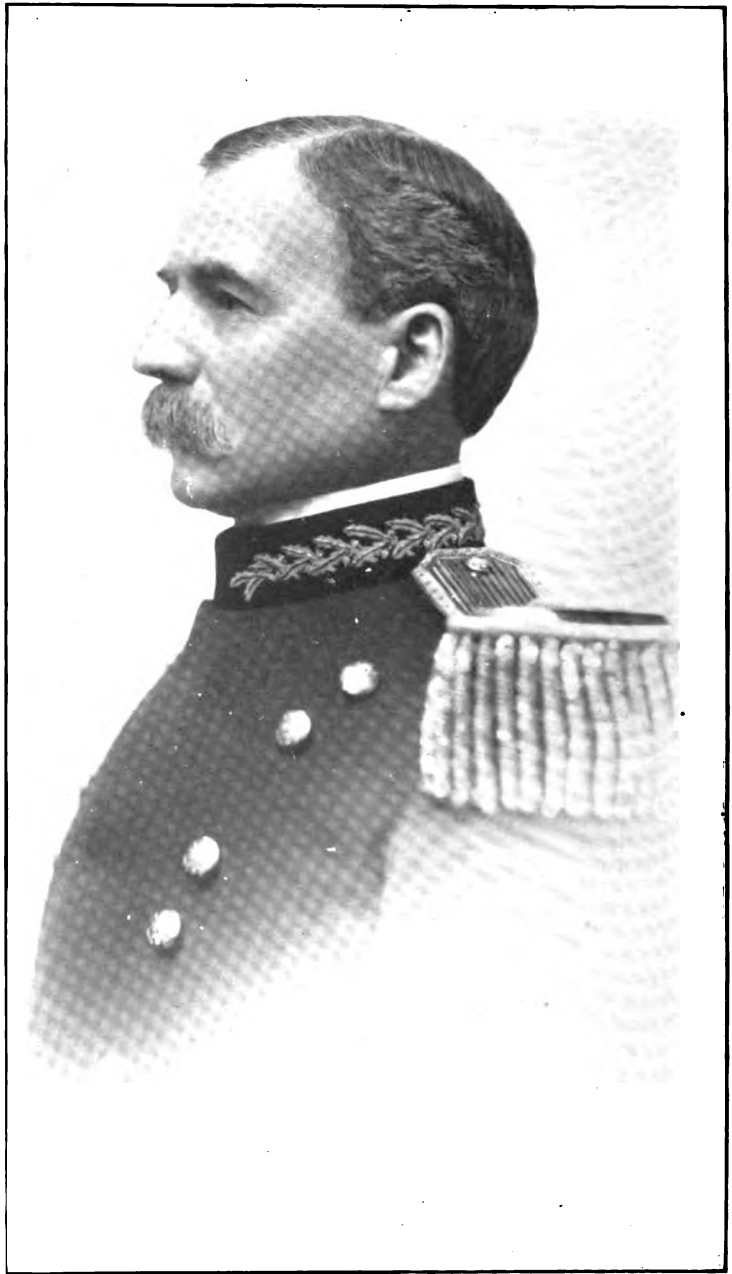
The success of the British at Omdurman, their slaughter of 11,000 Dervishes, leads one to wonder what might have been the result, if Custer's troopers had been armed with

magazine carbines instead of single-loaders. Not a single Dervish got within 250 yards of the British infantry.

On the whole, this is a valuable little book. There is no padding and little quoting. Examples cited seem to have a real purpose. Its form and arrangement are excellent. The discussion of each topic ends with a summary of the conclusions. The marginal notes assist the eye greatly in searching for matter, but they do not make fair amends for the omission of an index.

The author's style is clear and concise, but it would be too much to expect an English military writer to eschew the split infinitive or to say "different from," instead of "different to." Even Thackeray has said "different to," which would make it right, if anything utterly wrong could be right.

M. F. S.



GENERAL THEODORE J. WINT,
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GENERAL GEORGE A. VAINT
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CAVALRY IN MODERN WAR.

BY CAPTAIN JAMES G. HARBORD, ELEVENTH CAVALRY,
ASSISTANT CHIEF OF PHILIPPINE CONSTABULARY.

“Cavalry is all that it ever has been and more; it moves abreast of tactical reform; more than ever it is a strategical factor; if now it seldom thunders down in ponderous masses upon the *front* of an infantry line of battle, it may yet dash with equal effect upon the hostile flanks. If more poetry in the past, there is full measure of glory and usefulness in the future.”—*General T. F. Rodenbough.*

IN these days when our country carries more weight among the nations than ever before; when no important move is made in the world's politics without ascertaining in advance the attitude of America; with interests in every clime, and responsibilities as widely scattered as our regimental standards, we must recognize that increased importance creates jealousies, extended frontiers bring probabilities of friction, and be ready if necessary, to fight for peace.

As early as the time of Frederick some held that with the invention of firearms cavalry had lost its importance in battle. At the outbreak of our Civil War the same idea was prevalent, but both sides steadily increased their horsemen, until in 1865 the Northern guidons fluttered over eighty thousand cavalry. The cavalry emerged from that conflict with credit, and with its work in Indian wars, its part in the

Santiago campaign and the Philippine insurrection, still holds its place in public esteem. But cavalry is expensive, and few would advocate the false economy which provides something cheap and regrets it in the end. The best brains in Continental armies have studied the problem of having an effective cavalry ready to take the field in war without the burden of maintaining it during peace, and their failure indicates the impossibility of solution. With some still contending that the cavalry day in battle has passed, and facing certain expense if we maintain it, we should glance at what cavalry has done in modern war, and inquire what it can still do, and whether we have need of cavalry.

WHAT HAS IT DONE?

Napoleon's use of cavalry was tactical and strategical, but in the peace which followed Waterloo, men lost sight of cavalry efficiency until our Civil War commanded attention. In that great struggle cavalry importance increased, new characteristics were added, and old ones retained. Cavalry became self-protecting, fighting mounted and dismounted against infantry, cavalry and artillery, and almost reached independence on offensive or defensive, at rest or in motion. In the Gettysburg campaign it screened, raided, held positions until the arrival of infantry, reinforced infantry battle lines, and fought straight cavalry battles with revolver and saber. Perhaps so much cavalry efficiency was never crowded into so short a time as by Sheridan's horsemen from March 29 to April 9, 1865, a brief twelve days, which included Dinwiddie, Five Forks, Sailor's Creek; and it finally barred Lee's retreat at Appomattox that April morning until the arrival of the infantry ended the war. So too, Wilson's ride with twelve thousand horsemen through Alabama and Georgia exemplifies a complete school of modern cavalry warfare—charging mounted against infantry and cavalry, fighting infantry on foot, assaulting earth works, doing his own field engineering, and capturing cities and immense supplies.

From later conflicts the cavalry student has not much that is new to learn. Cavalry combats in the Six Weeks'

War did little to influence general results, though after Königgratz the cavalry was found in advance of the main army. The results did determine the Prussians to increase their cavalry notwithstanding the breech-loader, and shaped their ideas for the Franco-German War. In that war after Worth and Spicheren their cavalry was found well in advance, gained full intelligence of the French, and provided for the security of the German armies. Nor was it wanting on the battlefield. At Mars-la-Tour 800 men charged a French corps d'armée, pierced the line of battle and charged on until met by superior cavalry, when it rode back through, having brought 40,000 soldiers to a standstill and gained invaluable time. This charge cost three-fourths of the little command, lost not to rifle or cannon, but to fresh cavalry who charged with saber and lance, and found Von Bredow without reserves. In the Turko-Russian War, Gourko's raid showed the Russian adoption of American methods, and in 1882 the British cavalry held Cairo until the arrival of the infantry, which resulted in the surrender of 10,000 men, and ended the war.

Within fifty years cavalry has faced the saber, revolver, lance and carbine of other cavalry; has suffered fire from old smoothbore and modern cannon; has charged the muzzle-loader, breech-loader and magazine rifle of infantry; has developed the function of screening, and perfected the duty of security and information; has proved its ability to take care of itself against infantry in country unfit for mounted action; and has raided through hostile country—always emphasizing the importance of the dragoon, the type of cavalry toward which all nations are turning, and for the model of which military students still search the history of our Civil War.

WHAT CAN CAVALRY STILL DO?

Under present conditions its chief use is strategic. It finds opportunity far to the front at the opening of war to hinder the enemy's mobilization, gain touch with him, occupy important points on the line of advance, seize magazines, make requisitions, destroy roads, railroads, telegraphs, canals, junctions and bridges, and to gain the advantage of moral

effect. Far in advance it meets the opposing cavalry attempting the same for the enemy's army. Cavalry battles result, and to one side or the other accrues the prestige, never to be underestimated, of the first victory. That side by driving its opponent upon his infantry secures a strategical advantage. Generally cavalry must whip cavalry before it can attack the other arms. If encountered in wooded or broken country it fights on foot. Where delay is desired it engages dismounted at bridges, defiles, embankments, cuts and fords. It holds its own or more with the enemy's dismounted cavalry, and brushes aside small bodies of infantry. Its judicious employment in reconnaissance should have a paramount influence on the campaign. When the main armies meet and the cavalry has played its part in battle, the victor will use his cavalry in pursuit, and it will again be opposed by cavalry and have to defeat it before it pursues the infantry and artillery. Undertaking this duty, it establishes and maintains contact with the enemy, scouts the country, searches telegraph and post offices and railway stations, and exhausts all sources of information. The opposing cavalry observes the victor, ascertains whether all his force is pursuing, makes stands to delay that pursuit, destroys bridges, fords, railroads, canal locks, tunnels, rolling stock of railways, besides scouting the country for information. During any period of operations an efficient cavalry may undertake raids. It will ravage the country, destroy property and supplies of the enemy or his adherents, break communications and get information, decoy his cavalry from where its presence is inimical, disturb his plans, perhaps even causing detachments from his main army, and damage his morale and help its own.

Tactically, cavalry is well adapted to advance and rear guards. In battle it has as much usefulness as ever. The power of modern arms has increased the difficulty of choosing the moment for cavalry on the battlefield, but the problems still remain. The equipment of cavalry with the magazine carbine (in our service it is to be identical with the infantry rifle) has greatly increased its efficiency. The fire of dismounted cavalry is as effective as that of infantry.

The open order fighting of infantry gives cavalry a chance it never had when squares could be formed against it. The loss of life in battle has been diminishing in proportion to the numbers engaged as projectile weapons have improved. Considering the horse a missile of the cavalry, the reduced caliber gives it an advantage over other days. Who chooses a thirty-caliber Krag to shoot tigers, if he can get a twelve-bore rifle? What officer who knows the Moro, will risk the thirty-eight caliber revolver if he can get a forty-five? And the object is the same, to stop a charging animal. The small bullet may perforate bones without fracture, and in any case may leave life enough in the horse to bring him to contact with his rider's enemy.

When the infantry of the main bodies clash, the cavalry passes to protect the flanks of the army. From there it may be hurried where its fire action will be of use in the line. It may charge the opposing cavalry in any circumstances under which cavalry has ever charged it. When may cavalry charge infantry? Charging cavalry now needs nearly three minutes to cross a fire space of about 1600 yards while the rifleman is firing fifteen to eighteen shots. The maneuver instructions for 1904 assume that fresh infantry firing over an open plain with magazine rifle will inflict losses of one and one-fourth per cent. per minute on mounted troops moving in the line of fire at charging gait, at five hundred yards. If you balance the added accuracy they will have under 500 yards against the lack of it from 500 up to 1600 yards, the losses will not stop well trained and patriotic cavalry. No moral effect on either side is considered. But battles are not decided by arithmetic. The instinct of self-preservation is as strong in a man with a magazine rifle as it was in a cave-dweller carrying a club. In the best of foot soldiers there still lingers a trace of that dread of the trampling hoofs of charging squadrons which has existed since men first went to war on horses. Cavalry in battle is used in smaller bodies than formerly. It appears from the flanks in small flexible columns which admit of a rapid deployment into line. Infantry in extended order is particularly vulnerable to attacks on its flanks. Cavalry may charge to roll up

a firing line or compel an unfavorable formation. When infantry have nearly spent their ammunition, when exhausted by rifle or artillery fire, or in retreat, or when it is of poor quality or surprised, there is every prospect of the success of a charge. Cavalry has in all time charged unshaken infantry to enable its own to arrive or get away, and even in the most hopeless case it will be useful to the extent that it draws fire or causes delay. The cavalryman, like every other soldier-man, must be prepared to make sacrifice. When infantry fires against infantry or two artilleries oppose each other, each is too occupied to watch the enemy's cavalry, which may thereby gain its flank or rear unperceived. Carefully trained, armed and mounted, the cavalryman should believe that no infantry can stand his charge, for even against unshaken troops who shall say what infantry is shaken and what not? Fine troops from an exterior view may have lost heart and morale. Arms have improved, trajectories have flattened and powder no longer smokes, but the man behind the gun is the same old kind of a man. Proportionally he has not improved with his rifle. The lifted veil of smoke now shows him what was hidden in other days, the dead and wounded, the ghastliness of torn limbs, gaping wounds, and the ebbing of the crimson life-tide. There still comes a time when tension and exertion long sustained, the loss of comrades, the cries and groans of wounded, unnerve the soldier, no matter how recent the patent of his rifle, and make him the prey of charging horsemen.

The cavalry of to-day is conspicuous for its self-reliance. With all the dash of the old days, it charges with saber or revolver in hand, and carries its infantry support in the carbine scabbard.

DO WE NEED CAVALRY?

With a peace army that is only a nucleus for one of volunteers, the proportions of the several arms differ from those of an army complete for war. The cavalry and artillery in our peace army should be relatively greater than the infantry. Cavalry is the arm needed first, and it takes the longest to create. Business sense, sanctioned by the practice of all

the great military nations, dictates that we have least relatively of that which can be most quickly replaced. The cavalryman must be taught the use of three weapons and the care and use of a horse. It is the arm which ought to be kept in a constant state of preparedness for war. This is why the great Continental powers maintain expensive hosts of cavalry in long years of peace. Cavalry cannot be improvised. Mount a poor rider with pack in front and behind him, hang on a saber, revolver and carbine, and you no more have a cavalryman than you can get a doctor by clothing a man in professional garb and arming him with a box of pills. Our strength in war lies in the Volunteers. The infantry of the National Guard reaches into many thousands. The cavalry and artillery number but a few hundreds. The National Guard and our Regular Army will form our first line in war. The expense determines that the Nation shall furnish the mounted branches while the Guard assists with infantry. In 1898 there were five volunteer cavalry regiments and some scattering troops, while the infantry went beyond two hundred thousand. There are several hundred military schools and colleges scattered through the country, some government aided and some private. All of them give infantry instruction, some add artillery, but less than a dozen profess to instruct in cavalry. In every other business the experience of the old and wise is valued. We either reject the practice and belief of the older military nations or must maintain a force of cavalry which, when combined with a proper amount of artillery, the thirty regular infantry regiments and those of the National Guard, shall form a well balanced, correctly proportioned force for our first line in war. Surely we should follow this policy.

Organization in proper numbers must precede action, or even the preparation for action, by practical and theoretical instruction. No matter how scholarly and dutiful in peace, nor how dashing and devotedly patriotic her cavalry may be in war, there is something to be done by the Nation in properly utilizing such qualities, or they may but lead to her misfortune through the wasteful sacrifice of some of her best blood.

SIMPLER COMMANDS IN THE CAVALRY DRILL.

BY CAPTAIN SAMUEL D. FREEMAN, TENTH CAVALRY.

THE object of military commands is to secure the orderly execution of prescribed movements in drill or evolution. To insure this result, the command should accurately describe in military terms the movement to be executed; its language should be such as clearly to distinguish this movement from all others; it should be as brief as is consistent with the preceding conditions, and, finally, it should conform to a consistent system of military terminology. That is, the essential elements of a good military command are clearness, brevity and conformity to system, stated in their order of importance.

Generally the commands in our very admirable drill book conform pretty well to all these elements, but I believe that, particularly in regard to the last two named, there is still room for improvement. This seems to me particularly true of commands in the "evolutions of the regiment," and in a lesser degree of those in the "school" of the squadron and of the troop.

Military formations are of three classes, as described in the definitions of the drill book, viz.: order in line, order in column, and order in echelon. The last may be considered as a variation of either of the other two. Either may consist of elements, or units of various forms and dimensions, as is readily seen. The designation of either class of formation and of the units which compose it is a complete description of that particular formation to the military man. The object of the whole series of commands in the manual is simply to tell the different units of the organization how and when to change from one position to another, or from one of these formations to another, and the cases are rare in which

anything more than a brief indication of the movement and a signal for its commencement is required or desirable.

It will probably be conceded at once that the largest organization that can safely be maneuvered by a single voice or trumpet is the squadron, and that, consequently, the squadron must be considered the largest tactical unit of maneuvers. Commands, therefore, for the evolutions of the regiment should be addressed to the majors, and the squadrons should move to the execution of the evolution at the command of their majors. This is provided for, of course, in the drill book in a great many cases in a most admirable way, but in others it is made difficult. Majors are required to repeat the commands of the colonel and then to give the commands necessary for the movement of their squadrons. Now in some cases the colonel gives long, complicated commands, which include those for the movement of a particular squadron, which are identical with those of the major of one squadron, but which do not concern the others at all. To repeat such commands according to the rule is very cumbersome and possibly confusing.

Such a command, for example, is: 1. *Column of fours*, 2. *First troop, first squadron*, 3. *Right forward*, 4. *Fours right*, 5. MARCH.

There is no real necessity for such commands.

In order to avoid the repetition of such complexities, it should be sufficient for the colonel to indicate in general terms the character of the movement to be executed and to signal or command its beginning. This is most admirably done in such commands as, 1. *Line of fours*, 2. *On (such) troop (such) squadron*, 3. MARCH, though there is really no good reason why the colonel should descend to such particulars as specifying the troop which shall be the base of the movement.

It is an accepted principle of the drill that, after the formation of the squadron, no cognizance is to be taken of the relative order of troops in the squadron or of platoons in the troop (Par. 704). It is equally well established that after the formation of the regiment, no cognizance is to be taken of the relative order of squadrons in line or column. It

should, therefore, in general, be a matter of indifference to the colonel in what order the troops or platoons of a squadron may be found upon the completion of a movement. Some simple general rule would suffice to regulate those matters in all cases except where the colonel, for reasons, chooses to specify the order of movement with more particularity. All that is desirable might be accomplished by a modification of Par. 851, directing in more general terms that majors shall conduct their squadrons to position by the most direct methods of the school of the squadron that are applicable to the particular case. This would give both the colonel and the majors latitude in handling their commands.

The principal cases in which simplification of commands is possible and desirable are: (1) Those which involve formation of column, by troops, platoons or fours; (2) those which concern formation of line of fours, or line of platoons in column of fours, and (3) those for changing front.

Take the third case: The change of front by a single command is provided for in only one case, that of the regiment in line of masses (Par. 903). In all other instances it requires two commands and two movements to accomplish the same thing, and this without gaining anything in time, simplicity or directness. If the movement is a desirable one, as it seems to be, there is not the slightest objection, so far as I can see, to using the same form of command, as in Paragraph 903, for a regiment or squadron in line of any kind (Par. 732, 904), and other similar cases.

Paragraphs 749 and 771 require no change, though it is to be noticed that the figure in the text for Paragraph 771 is wrong for the movement there laid down, but corresponds exactly to "Squadron right." For a simple change of front, the commands suggested might well be introduced.

In movements of the second class above, viz.: those involving formation of line of fours, it is to be remarked that there is no essential difference between a line of troops in column of fours and a line of platoons or squadrons in column of fours (Par. 881), and all are provided for in the text.

If it be desirable to restrict the term "line of fours" to the line of troops in column of fours, it is certainly permissible and, I think, advantageous to say "line of fours by platoon" or "line of fours by squadron"; neither expression would cause the least confusion in the mind of any one who knows what is a line of fours.

The present command seems to me very clumsy and more liable to produce error than if such a formation were designated "a line of fours by platoon." Thus (Par. 774) the command might be: 1. *Right front into line of fours by platoon*, 2. MARCH. And Par. 746: 1. *On right into line of fours by platoon*, 2. MARCH. And so for other cases. Similar commands would be good in the school of the troop. (Pars. 615, 616.)

In regard to the first class of movements above—forming columns of various units—it is desirable to be able to form column to the front or rear as well as to a flank. This may be done in a manner entirely similar to the formation of the column of fours forward or to the rear in the troop drill. In this connection, it may be remarked, there seems to be no command in the "school of the regiment" for advancing in column of fours from line.

The regiment, or squadron, being in line, to advance in column of fours, platoons or troops, the following simple form of command is sufficient: 1. *Column of fours (platoons or troops)*, 2. *Right forward*, 3. MARCH. If by fours, the major of the right squadron gives the same command for his squadron, and the movement is executed as in Par. 720, school of the squadron. The other squadrons move by fours to the right and follow the first.

If by "troop or platoon" the right unit moves forward as before, the remainder execute fours right and then fours left in time to follow the leading unit in column. There is no complexity, no delay, no multiplication of commands, no introduction of new things.

Being in line of columns or line of masses, to march in column of fours forward or to a flank (Paragraphs 748, 896, 757, 758 and 901) the command may be: 1. *Column of fours*, 2. *Right (or left) forward*, 3. MARCH. Or: 1. *Column of*

fours, 2. *On first (or fourth) troop*, 3. *Right (or left)*, 4. MARCH. So from line of platoon columns, to march in column of platoons (Pars. 772 and 910) the command may be: 1. *Column of platoons*, 2. *Right forward (or right)*, 3. MARCH. And in Par. 1047, review: 1. *Pass in review*, 2. *Column of platoons*, 3. *Right*, 4. *Guide right*, 5. MARCH.

Other changes suggest themselves, but these cover about all of the cases where simplification may be urged as decidedly advantageous. There might, for instance, be something said in favor of returning to an old expression, "by fours," inasmuch as the same very accurately descriptive form of words is used to advantage in such cases as "by file," "by trooper," "by twos," "by platoon," and is perfectly familiar to everybody. For the sake of uniformity, or "system," it might be better to adopt the somewhat longer expression, "column of fours," even for the troop, and say: 1. *Column of fours*, 2. *Right forward (or rear)*, 3. MARCH. And: 1. *Column of fours*, 2. *Right*, 3. MARCH. There is a tendency, too, and it seems to me a very natural one, to drop the word "forward" in putting a column in motion and changing direction at the same time, as there is really no more reason for saying "forward, column right" than there is for saying "forward, right turn."

Effort should be made to simplify and generalize the commands of superior officers, leaving to subordinates the duty of giving the proper commands for their units in turn. I believe that this, in addition to other advantages, would tend to secure greater alertness at drill on the part of every officer and man.

The commands of the colonel should conform more in style to those laid down for the brigade commander—direct, simple indications of the movement to be executed—for the reason, as before stated, that it is practically impossible for one voice or one trumpet to control the movements of a full regiment of cavalry.

It may be worth while to call attention to an apparent exception to the above statement. In the formation of the regiment, the adjutant gives the commands for drawing saber and presenting to the colonel; whether the adjutant,

being the mouthpiece of the colonel, is supposed to have a more powerful voice than any one else, is not determined.

It would seem quite appropriate to omit the saber present at formation and allow the adjutant to report when the regiment is formed, as is done in the case of the squadron. If it is desired, however, to retain the present, the majors should command "draw saber" while the adjutant is proceeding to join the colonel, and the command "present saber" as soon as the adjutant takes his post. When the salute is acknowledged, they should bring their squadrons to "carry saber" and await the pleasure of the colonel.

THE ORGANIZATION OF AN ARMY.

BY CAPTAIN JOHN P. RYAN, SIXTH CAVALRY.

THE purposes to be subserved by military organization may be divided into two general classes: First, those which relate to the employment of the army in battle, and second, those which relate to its general maintenance both in peace and war. The first gives rise to what is termed the tactical organization of the army; the second to its administrative organization. Originally these two forms of organization were often quite distinct; thus, companies and regiments were purely administrative units, while battalions were only employed in war. To a greater or less extent, this distinction continues to exist in most armies at the present time, as in the regiment of artillery and in the heavy infantry regiments of some of the Continental armies.

It is now recognized that the best organization for an army is that which serves both the tactical and administrative needs, and this is the direction of all modern improvements in organization. Success in battle being the ultimate object of all armies, and this depending mainly upon the facility with which the army can be commanded and maneuvered on the field, it follows that tactical considerations are of vital importance in determining the organization to be given to the army. It is, of course, desirable that the arrangement and grouping of the troops should facilitate the important questions of supply, sanitation, etc., but these and all other administrative needs must be regarded as secondary.

Organization, in the most general sense, means the bringing of independent bodies into such interdependent relations with one another as to form a single organic whole, in which all the parts will work together for a common purpose. As

applied to an army, the independent bodies are primarily the individual soldiers, and the tactical purpose to be accomplished by organization is so to bind together the general who commands and the soldier who executes that the whole may act as a unit in accordance with the wishes of the commander. The manner in which it is sought to bring about this result is practically the same in all modern armies, and may be briefly outlined as follows:

First, those individuals who are to use the same weapon are assembled in small groups and placed under a leader by whom they are trained in the use of the weapons and by whom they are commanded in the fight. Several of these groups are then united to form a larger group, and these are again combined to form still larger groups, and so on, each unit-group and each combination of groups being commanded by a leader who receives his orders from, and is subordinate to, the commander of the next larger group of which he forms a part.

The system of organization now in use is based on the experience of centuries of warfare. It has been a progressive development, keeping pace with improvements in arms and methods of war and the ever-increasing size of armies.

To a better understanding of present methods, it seems advisable to review briefly this development. Following the downfall of the Roman Empire and for many centuries thereafter, practically no military organization existed in Europe. While wars were frequent during the middle ages, no permanent armies were maintained, and the profession of arms was the occupation of adventurous spirits who were banded together in companies, sometimes four and five hundred strong, under the leadership of more or less renowned captains, and who were employed by kings and princes in their petty wars. Armies were raised only when war was imminent, and were made up in great part of these mercenary bands, in part of national levies, and later of feudal contingents. Companies and regiments were sometimes formed for administrative purposes, but tactical organization there was none. The battle was a *mel e* and the troops, once en-

gaged, could only be withdrawn when one side or the other was defeated.

With the collapse of feudalism and the consequent growth of national life, standing or permanent armies began to be maintained. In the beginning, these armies were often made up of the old bands of wandering mercenaries, and while they were organized into companies and regiments, each company continued to carry its own banner, indicating its real origin, and there was no uniformity either in the strength of the company or regiment. With the introduction of regular and scientific tactics, which followed as a natural consequence to the standing army, the advantage of bodies of uniform strength became apparent, and battalions and squadrons were introduced as the fighting formations of infantry and cavalry.

Originally, battalions were dense masses numbering several thousand men and containing many regiments. As changes in arms led to the adoption of more extended formation, it became necessary to subdivide into smaller fractions, and battalions were gradually reduced in size until they became mere fractions of a regiment. Finally, when the advantages of uniform and permanent organization were more fully understood, regiments were also made of uniform strength and the battalion became a fixed fraction, usually one-half or one-third of a regiment, but still retained its distinct character as a tactical unit; while for administrative purposes, recruiting, payment, clothing, etc., the regiment was the unit.

About the latter part of the seventeenth or beginning of the eighteenth century, brigades, formed of several battalions, were first used; later, divisions, composed of the several arms, were occasionally employed in battle. It was not, however, until the latter part of the eighteenth century, during the wars of the French Republican armies that the division as we now understand it, having its permanent commander and staff and proper proportion of the different arms, became a permanent feature of army organization.

Prior to the introduction of brigades and divisions, the army was merely an aggregation of battalions and regi-

ments. For the battle, the army was formed with an advance-guard, a first and second line, and a reserve. It was also divided into wings, there being distinct commanders for these bodies as well as for the infantry, cavalry, and artillery. The higher commanders were all attached to the general headquarters, and were detailed for these subdivisions of the army by the day, and there was no bond of union between the general and his command, as there is between a general and his division.

In 1805 Napoleon formed the first army corps, which, because of its utility in handling large armies, was shortly after adopted by the other nations. Later developments have been the grouping of separate armies under the command of a general-in-chief.

This brings us up to the present time and to a consideration of the armies of to-day. The various groups into which an army is subdivided arrange themselves naturally into two classes: First, those groups which are made up entirely of one arm of the service, and which have a certain degree of permanency, as companies, squadrons, battalions, regiments; and, second, those groups which are formed by the combination of the several arms, and have a temporary character, as brigades, divisions and army corps. The lesser groups constitute the special organization of the several arms of the service. The larger groups relate to the organization of armies. This distinction has been recognized in the preparation of this paper, and the subject is treated under the two sub-heads: "The Special Organization of the Several Arms," and "The Organization of the Army."

Beginning with the company, which is the smallest group of infantry and which has its counterpart in the troop or squadron of cavalry and the battery of artillery, its strength is determined within limits by the requirement that it should be able to act as a unit in the battle under the direct command of a single leader. Thus, at the present time, we find companies consisting of from 100 to 125 men led by a dismounted captain, as in the British army and the army of the United States; and of 200 to 250 men commanded by a

mounted captain, as in the Continental armies and the army of Japan.

Before the development of the present dispersed order of fighting, and when the attack was made by the battalion as a unit in a deep column of subdivisions, the size of the company was of very little importance from a tactical point of view. In some cases, as in the army of Frederick, the company organization was entirely ignored in the battle, his battalion of five companies being divided into eight platoons or sections for the purpose of drill and fighting. At this time the company was merely an administrative unit consisting usually of about one hundred men.

With the development of the line attack, the difficulties of command were immensely increased. It was no longer possible to handle the battalion as a single unit and its rôle in this respect was gradually assumed by the company. As the new rôle of the company became recognized, the advisability of adding to its strength and thus increasing its efficiency in independent action became apparent, and it has been steadily augmented until it has attained its present size of 250 men, which is probably a maximum under present conditions of warfare. The company has, in effect, replaced the battalion as a fighting unit, and the battalion of to-day is the brigade of the eighteenth century.

With the development of extended order, the number of men that can be directly influenced by a single leader has rapidly diminished, and while it may be possible for a mounted captain to exercise direct command over two hundred dismounted men, he can not exert over all the men, when deployed in extended order for battle, that personal influence and control necessary to give effect to his commands. The company is therefore subdivided into several platoons, each led by a lieutenant, the platoons are divided into sections led by sergeants, and finally the sections are divided into squads of eight to twelve men under the charge of corporals, thus carrying out the idea of personal leadership to the last man.

The company is also an important administrative unit. The captain is responsible for the discipline, instruction,

supply and general maintenance of his company, and the fighting efficiency of the army largely depends upon the character of his work.

The next larger group of infantry is the battalion, which in the armies of all the great powers contains on a war footing about one thousand men, and is formed by uniting four strong companies, or eight weak ones, as in the British battalion. The only exception to this rule is found in our own army, where the battalion is made up of small companies and has a war footing of about five hundred men. During the War of the Rebellion, our battalion was in some instances organized as in the British battalion at the present time, that is, of eight small companies aggregating about eight hundred men, and our experience appears to have been that of foreign armies: that the battalion was too large to be handled as a fighting unit and contained too many companies to be treated as a group of separate units. Upon the outbreak of the Spanish War, the battalion was reestablished for the infantry, but was reduced to four companies numbering about four hundred and fifty men. While the battalion may be considered to have lost its function as a fighting unit, it is still referred to by most military authorities as the tactical unit of infantry. Used in this connection, it appears to mean the smallest body of infantry capable of carrying out a definite object in the attack through its several phases.

The term, tactical unit, as used at the present time, is not susceptible of exact definition. By some authorities it is defined to be the smallest fraction of a body of troops which can fight independently and perform some specific duty on the battlefield, the individual men and horses composing it being personally known to the commander, who must, moreover, be able to direct it by word of command. By others it is used in referring to any tactical group which forms one of the main subdivisions of a larger group; thus the regiment is sometimes called a tactical unit of the brigade; the division, the tactical unit of the army, etc. Colonel Wagner says the tactical unit on which the organization of an army should be based is the largest body of troops that can be directly commanded by a single leader and at the same time

be able to appear in close order on the battlefield without quickly incurring ruinous losses from the enemy's fire.

However, most authorities agree in considering the battalion, the squadron and the battery as the tactical units of the different arms. Referring to the small size of our company and battalion as compared with that of all other large armies, I offer the following suggestions :

It is a fundamental principle of tactical organization that the number of independent units in an army or other body of troops should be as small as possible—this to facilitate the transmission of orders and the execution of commands.

As a corollary to this, it follows that the strength of any independent unit should be a maximum consistent with the natural limitations of the case. If a mounted officer, assisted by four lieutenants, can maintain effective control over two hundred men in battle, then it is advantageous and economical to have this organization. With this size for the company, the battalion would naturally be 1,000 men, for the battalion commander can handle four companies as readily as the brigade commander can maneuver four battalions or the division commander several brigades. On the other hand, the difficulties of command and control are greatly increased with untrained soldiers; smaller units and a greater proportion of officers are necessary. This would seem to fit our case.

The battalion is not ordinarily an administrative unit, though in the British army it replaces the regiment in this respect. In our army it has not been customary to retain the battalion organization in time of peace, but by the law of March 2, 1901, the infantry regiment was organized with three battalions, and an administrative staff consisting of a commissary and quartermaster was assigned to it. To this extent the battalion has become with us an administrative as well as a tactical unit.

The regiment, which is made up of two, three or four battalions, was originally an administrative unit solely, and it still retains that character in the British army, where it has no place in the order of battle. In practically all other modern armies, the regiment is now regarded as an ideal tac-

tical unit. The German Infantry Drill Book very aptly describes the importance of the regiment in the following words:

“The regiment is, owing to its centralized form, the homogeneity of its staff officers, the number of parts comprising it (three or four battalions) and its historical associations, pre-eminently adapted to executing in a uniform manner any tactical task that may devolve upon it. The regimental system facilitates the tactical coöperation of its component parts and the regulation of the proportion of infantry which it may be desirable to employ in the first line.”

To which I may add that the regiment is to the officer what the company is to the soldier, “his home,” and the spirit of comradeship developed by association in time of peace proves the strongest tie in holding the regiment as a unit in the fight.

In foreign armies it is usual to maintain a depot battalion in each regiment. In peace time this battalion exists in skeleton form, but when war breaks out it is officered and becomes the recruiting depot for the regiment. This was attempted for the regiments on foreign service in our army in 1899, but the exigencies of the service caused it soon to be given up. It is probable that under more favorable circumstances it would be adopted.

CAVALRY.

In the cavalry the squadron is the basis of tactical organization and in practically all armies but our own it has a war footing of 150 to 175 men.

Marshal Marmont, writing on this subject more than half a century ago, said: “The fighting unit of cavalry is called a squadron, and the rule for determining its strength is to unite the greatest mobility with maintenance of order. A squadron having too great a front would easily be thrown into disorder by the slightest obstacle, and every troop in disorder is half conquered. Experience proves that the best formation, that which most completely unites strength and consistence with great facility of movement, is a squadron of forty-eight files, ninety-six men, divided into subdivisions

of twelve files each. The inconsiderable number of men and horses permits that arrangement in the cavalry which would be impossible in the infantry, that is, the fighting unit is the same as the unit of administration."

Our own cavalry has at different times been organized as here outlined; the last time in the War of the Rebellion when the cavalry regiments were formed of three battalions of two squadrons of two companies each, making six squadrons of 150 men to the regiment. After the war the present organization of three squadrons to the regiment was adopted, probably to conform to the infantry organization. In foreign armies the squadron is both a tactical and administrative unit; it is usually commanded by a major with a captain second in command, and is subdivided into several troops commanded by lieutenants. With us the troop of one hundred men is the administrative unit. The cavalry regiment abroad is made up of from three to seven squadrons, one of which is usually a depot squadron.

ARTILLERY.

The battery of six guns is the basis of the tactical organization of the field artillery.

With the advent of the rapid fire field gun it is probable that the battery will be reduced to four guns. This reduction has already been made in our service by a recent executive order, and is made advisable by the increased difficulties of regulating and controlling the fire of guns which can deliver twelve aimed shots per minute, as compared with the old gun having a capacity of only two or three rounds. Moreover the increased consumption of ammunition will demand additional ammunition wagons and teams, and will add materially to the personnel of the battery.

Two or more batteries working together under one command constitute the battalion of artillery. Our battalion of three batteries corresponds to the British "brigade-division." The battalion organization now existing in our field artillery is purely for purposes of instruction and administration. The regiment of artillery, recently abolished in our service

but still retained in many foreign armies, is an administrative unit solely.

By the reorganization act of 1901, machine gun batteries are declared to be part of the field artillery, though no tactical organization for machine guns has yet been adopted. The tactical use of machine guns is at present in an experimental stage. The British have organized their machine guns into sections, which they have attached to the infantry and cavalry brigades, and this is the direction of our experiments at this time.

ENGINEERS.

In the United States Army the engineer troops accompanying the army in the field perform the duty of sappers, miners and pontoniers. In most European armies they are also charged with the duties of signaling, and in some instances they have the additional duty of the management of the railroads within the theatre of operations. Engineer troops are organized into companies, battalions and regiments in the same manner as infantry. The strength of the company varies with the particular character of work it is intended to perform, and usually contains from 250 to 500 men. It is probable that our regular engineer troops will shortly be organized into companies of pioneers and pontoniers, the pioneer company to consist of 165 men, twenty-five of whom shall be mounted, and the company to be equipped with intrenching tools and explosives. The ponton company to consist of 150 men, five noncommissioned officers being mounted. The companies are united into battalions composed of three pioneer and one ponton company. When serving with the cavalry the engineer troops will be mounted

In the United States Army it is usual to supplement the regular force by details from the line of selected individuals, or by transfer of entire organizations. Both of these methods were pursued in the War of the Rebellion, but upon the outbreak of the Spanish War special enlistments of trained mechanics were made and they were organized into a brigade of three regiments, equipped as infantry.

SIGNAL CORPS.

The Signal Corps is charged with the management of the field telegraph and telephone, the military balloons and the service of signaling generally. For service in the field signal troops will be organized into companies of 150 men, who will be mounted when serving with the cavalry. These signal companies with us correspond to telegraph sections of the engineer companies in foreign armies.

MEDICAL CORPS.

In all modern armies there is provided for the army in the field a complete sanitary organization which usually comprises detachments of the Hospital Corps attached to batteries, battalions and regimental field hospitals, including a bearer and ambulance section for collecting the wounded and conveying them from the dressing stations to the field hospitals; an advance medical supply depot which accompanies the first line of supply; the hospital transport, railway trains, hospital ships, etc., by which the sick and wounded are conveyed to hospitals along the line of communication or to the base, and, finally, the base hospitals and convalescent camps.

This completes what might be termed the special organization of the several arms and we have now to consider how these squadrons, battalions and regiments shall be assembled to form an army.

In the organization of an army the main points to be determined are: What shall be the size of the army? What shall be the proportion of the different combatant arms and special troops? How shall they be combined? And finally, what shall be the primary subdivisions of the army?

When we come to consider the proper strength of an army we find a general concensus of opinion among military writers, supported by the practice of nations, that a single army should not exceed 150,000 fighting men. Experience has demonstrated that very large armies have less cohesion and flexibility than smaller ones, and that the rapidly increasing difficulties of command soon tax the ability of the

average leader. Larger armies have many times been formed, but usually under force of circumstances and to meet exceptional conditions. Where the force put in the field exceeds this number it is customary to divide it into two or more separate armies, and, where these separate armies have the same objective, to combine their operations under a general-in-chief. This principle of the division of large combatant forces into several armies has been exemplified in all recent campaigns; was practiced by both the North and the South in the Rebellion, and is now being carried out in the Japanese army in Manchuria.

PROPORTION OF THE DIFFERENT ARMS.

In determining the proportion of the different arms that shall go to make up the army, we find that there is no fixed rule. In a comparison of many field armies of the past century, if the infantry be represented by unity, the cavalry has varied, usually from one-fourth to one-tenth, while the artillery has varied from two to five guns per thousand combatants; and even these limits are often exceeded.

In Johnston's army during the Atlanta campaign there were 144 guns to 53,000 men, or from two to three guns per thousand, while the cavalry was from one-fourth to one-fifth as numerous as the infantry. In Sherman's army at the same time the cavalry was one-seventh as strong as the infantry, and there were about two guns per thousand. At a later period, during the march to the sea, the guns were reduced to one per thousand and the cavalry to one-fifteenth of the infantry.

In the Union army at Gettysburg the cavalry was almost one-fifth and there were from two to three guns per thousand. These proportions were about the same as the Confederate army. The act of Congress of July, 1861, providing for the mobilization of 500,000 volunteers, directed that not more than one company of cavalry or artillery should be raised to every regiment of infantry. Actually there were organized on the Union side during the war 1,700 regiments of infantry, 272 regiments of cavalry and 78 regiments of artillery.

According to Napoleon, the cavalry should be from one-fourth to one-fifth as numerous as infantry, the artillery one-eighth, the engineers one-fortieth and the train one-thirtieth. In the Second German army in 1870, which numbered over 250,000 men, the cavalry was between one-fifth and one sixth, the artillery from one seventh to one-eighth, the engineers about one twenty-second, the train one-thirteenth and the sanitary troops one-twenty-fifth.

Applying these general averages to a particular case, an army of 100,000 men might be composed as follows:

Infantry	65,000
Cavalry	12,000
Artillery (300 guns)	9,000
Engineers	4,500
Sanitary troops	4,000
Signal troops	600
Train	5,000
Total	<u>100,100</u>

The English army in South Africa was composed as follows:

Infantry	62,369
Cavalry	16,431
Artillery (270 guns)	7,930
Engineers	3,100
Train troops	<u>5,750</u>
Total	95,580

PROPORTION OF THE THREE ARMS.

The relative numbers of the infantry, cavalry and artillery will vary with many conditions, principally, however, with the character of the country in which the operations are to be conducted, the composition of the enemy's forces, and the adaptability or otherwise of the people for a particular arm.

In a difficult, mountainous country, having few roads, the cavalry and artillery would find little scope for their operation and would be proportionately diminished. On the other hand, in an open country, against a mounted enemy, a large proportion of cavalry and artillery is needed. The influence of conditions of this character on the composition of an army

was very markedly shown in the war in South Africa. General Kitchener, testifying before the commissioners on the conduct of the war, said: "Except in Natal, and even there to some extent, the infantry were at a great disadvantage against mounted enemies, and for this reason, in the latter part of the war, all operations were carried out on the British side by mounted men."

Lord Roberts, testifying before the same commission, said: "What I think is, that in all future wars we should require a far larger proportion of mounted men than we have ever had hitherto, and that the cavalry must be prepared to fight on foot much more than they have ever done before."

In the Japanese army in Manchuria at the present time the cavalry force is insignificant. This is due to the fact that the Japanese are indifferent horsemen and there are few, if any, horses in Japan fit for cavalry service.

Having determined upon the strength of the army and the proportions of the different arms, the next question to be decided is the manner in which the several arms shall be distributed in forming the higher tactical units of the army. Whether, for instance, fractions of the army shall be made up entirely of cavalry and artillery, and others of infantry only, or whether the cavalry, artillery and infantry shall be distributed uniformly among the main subdivisions according to their strength.

CAVALRY.

Until the latter half of the nineteenth century it was the usual practice to form a large part of the artillery and cavalry into reserves, which were held in rear of the army and under the immediate command of the general commanding. This frequently resulted in withholding just that much cavalry and artillery from the fight, and history contains many instances of lost opportunities due to the impossibility of getting these reserves into action in time to be of any use. These reserves have now practically disappeared. The cavalry has found its proper place in front of the army instead of in the rear, and the artillery is gradually moving up to the line of battle; the artillery reserve gave way to the

corps artillery, which is in effect but a smaller reserve, and this in turn is about to be absorbed into the divisions.

Following the developments of the War of the Rebellion and the Franco-Prussian War, it is now generally recognized that the most advantageous use of cavalry is in screening the movements of our own army and gaining intelligence of the enemy. To do this effectively, the cavalry must operate well in advance of the main body, and its movements will, to a great extent, be regulated by those of the enemy. It must therefore be independent. These considerations lead to but one conclusion: the principal part of the cavalry must be organized into independent bodies under their own leaders, only so much cavalry being assigned to the infantry divisions as is necessary for their immediate security.

In fixing the size or strength of these independent cavalry bodies we are influenced by several considerations. Experience in past wars has demonstrated that very large bodies of cavalry are difficult to handle and supply, and, moreover, they lack the mobility and cohesion of smaller bodies. Marmont, whose ideas are always carefully considered, says: "I place at 6,000 horse the utmost force of cavalry manageable."

During the Napoleonic wars great masses of cavalry were frequently used. In the grand army which invaded Russia, Murat commanded a cavalry reserve of four corps, numbering 40,000 men. This use of cavalry has now practically disappeared, and it is rare indeed to find 10,000 cavalry in one body. During the War of the Rebellion the largest body of cavalry united under one command was 13,000, the cavalry corps of General Wilson in 1865. The present tendency is still further to reduce this strength, and the cavalry is now usually organized into divisions of about 3,600 men. This was the organization of the German cavalry in the Franco-Prussian War and of the British cavalry in South Africa. This is also the organization proposed by our Field Service Regulations, though our cavalry division has a strength of 9,000 men, our brigade corresponding to the European division. It may, therefore, be accepted that the cavalry corps will rarely be organized in future, and that the

cavalry will be organized into divisions and placed under the orders of the army commander.

The present accepted rôle of cavalry, that of acting as a screen to the movements of the army, will often take it many miles in front of the main body, and if it is not to be held back by small detachments of the three arms its power of resistance must be increased. It is, therefore, usual to assign to each division of cavalry several batteries of horse artillery. In European armies, infantry in wagons sometimes accompanies the cavalry division.

ARTILLERY.

When we come to consider the proper grouping of the artillery a different course of reasoning prevails. While artillery produces its greatest effect by the concentrated fire of many guns, we read of immense groups of from twenty to thirty batteries in action under one command, as at Gettysburg and at Wörth and Sedan; yet, if the artillery occupied its place in column in large masses of this size, it would often be difficult, or even impossible, to find suitable positions for its employment, and much of the artillery would be kept out of the fight, or would have to be distributed along the front of the battle. It is therefore better to distribute the artillery in groups of not more than eight to ten batteries among the infantry columns, where it marches near the head of the columns ready to come quickly into action, provision being made to form larger groups under a single command when the favorable opportunity arrives. This increased distribution of the artillery is also favored by the great range of the modern field gun, which makes it possible to concentrate the fire of widely separated batteries on a single objective, and by its increased mobility, which enables the batteries to concentrate rapidly when desired.

At an earlier period when the field gun had a comparatively short range and was difficult to move from place to place on the field, it was, perhaps, necessary to keep the artillery massed in reserves, if its fire was ever to be concentrated on a single point.

INFANTRY.

Turning now to the infantry, which, under modern conditions of warfare, is by far the most numerous and most important arm of the service, it is with the proper grouping of this arm that army organization has mainly to do.

The theory of the formation of the modern army is that it shall consist of several fractions or units, equal in size and composition, complete in all parts, and able to act independently at any time. It is by this arrangement that the army is rendered flexible; thus, it may be moved in several columns on parallel roads, and if any column be attacked, it will be able to maintain itself until supported by the others; or, if it be necessary to detach a portion of the army, it will not be necessary to gather together infantry, cavalry and artillery and create new staffs, etc.

This fraction or unit is the "division," sometimes called the "infantry division," and of which Napoleon said, "It should be able to fight unsupported for at least an hour." Modern opinion puts it at about twelve to sixteen thousand infantry, somewhat more than the Emperor was accustomed to give it. Such a force will have a battle front of from two to four miles, and its length in column will be such that it can deploy for action within three or four hours.

In order that the division may act thus independently it is necessary that it be provided with cavalry and artillery and a proper proportion of special troops; also a supply train carrying a reserve of ammunition and food and a complete administrative staff.

To facilitate the exercise of command and to give greater flexibility, the infantry of the division is subdivided into several brigades of two or three regiments each.

The following is the proposed organization of the division in the United States Army:

- Three brigades of infantry.
- One regiment of cavalry.
- Six batteries of field artillery.
- Three batteries of horse artillery.
- One battalion of engineers.
- One company of signal corps.

Four field hospitals.

One ammunition column, composed of three sections of twenty-one wagons each for small-arms ammunition, and two sections of twenty-one wagons each for artillery ammunition stores.

One supply column, composed of three wagon trains of twenty-seven wagons each, and one pack train.

When the army consists of 100,000 men or more, the divisions are assembled into army corps; this on the principle that five or six independent units is as many as one commander can efficiently manage. In an army of 150,000 men there would be ten such units; it is, therefore, better to organize the army into four or five corps, each containing several divisions. There is universal agreement that the army corps should not exceed about 30,000 fighting men. A body of troops of this size would occupy about fifteen miles in column of route, and would require an entire day to deploy for action.

When the army corps is created, it, in many cases, replaces the division as the unit of organization, and the number of cavalry, artillery and special troops with the division is proportionately diminished, the troops withheld from the divisions being united to form the corps cavalry, the corps artillery, the corps administrative troops, etc. This is the case in many European armies where the corps organization is maintained in time of peace. In such cases we find the division usually constituted as follows:

Two brigades of infantry.

One to four squadrons of cavalry.

Four to six batteries of artillery.

One company engineers.

One bearer company.

In either case, however, whether the corps is the unit of organization, having its own corps troops, or whether it is merely an aggregation of divisions, the total strength of the corps remains about the same.

Where the army corps is the unit of organization, if it be necessary to detach a division, a proportion of the corps

troops, cavalry, artillery and administrative troops are attached to it, and it becomes the reinforced infantry division, similar in strength and composition to the division proposed for our army by the Field Service Regulations.

Finally, when several army corps are united under a single chief they constitute an army. One or more cavalry divisions usually form part of such an organization.

SURRA.

Through the courtesy of General Wint and his aide, Lieutenant William L. Karnes, Sixth Cavalry, the JOURNAL has been furnished the following extracts from the exhaustive report on the disease of surra, made by the board composed of General Wint, Lieutenant-Colonel Ramsey D. Potts, Artillery Corps, and Lieutenant Karnes. The board not only made a thorough investigation of the disease in the Philippines, but also visited India, Burma and Java, and it is believed that their report contains more useful information concerning this fatal disease than anything ever before published on the subject. These extracts, which contain the gist of the report, must, therefore, be of interest to every American officer who has served in the Philippines, or expects to serve there. They are published by permission of the Chief of Staff.—
EDITOR.

THIS disease has existed in certain sections of India for generations, notably on the northwest frontier and in the Punjab; an outbreak occurred in almost every district in India and Burma within the twenty years preceding 1897. It has been reported from the Persian Gulf, Tonquin, Korea, Egypt, Syria, Algeria, and Zululand, and latterly from Java, Borneo, Madagascar, Mauritius and other points; in fact the disease has appeared almost everywhere in the far East.

Dr. Lingard, in a report dated 1899, stated that there were also strong reasons for believing that animals had succumbed to this disease in Abyssinia, the Zambesi, East Africa, Australia, North America, Brazil and Southern Europe, but the reasons are not given.

It is impossible to assign a date for the first appearance of this disease in the Philippines, but it is believed that it is not of recent origin. It has doubtless existed there for many years unknown, under various names signifying fever, debility and emaciation, its marked characteristics. Careful inquiry during the past eighteen months amongst native veterinarians (so-called) and horse owners at many different points in the Islands, has elicited the fact that a disease

entirely similar to the one which has recently swept off nearly all the native ponies (surra), has existed in the Islands for many years in a varying degree from year to year, but generally epidemic every third or fourth year. It is unquestionably a fact that the disease attacked and carried off many native ponies in certain sections, notably Batangas, South Camarines, and Albay provinces in Luzon, and the island of Panay, before it appeared amongst American horses and mules at all; and it is also believed that it appeared at these and other points some months before animals in Manila were affected.

It is also well known that Dr. Nockolds, veterinarian First Cavalry, recognized and reported the presence of the disease months before. Dr. Nockolds was born in India, and was familiar with the parasite and disease from actual experience. Corroborative evidence on this point was obtained from American teamsters and packers who had entered those provinces with the first American troops and, on discharge, had taken service with the Quartermaster's Department, their service there being practically continuous, antedating the first appearance of surra amongst American animals, or glanders as it was generally called before the parasite was discovered. Whether or not this disease was epidemic in the Islands upon our advent or was imported afterwards, is a material point, and affects very closely the measures to be taken to prevent the spread of the disease or its further introduction, as the case may be. If recently imported, the problem of its extermination is greatly simplified; but the burden of proof is quite adverse to this theory, and it is believed that there are many infected districts throughout the islands which will have to be determined and then avoided, as in India and Burma. There the gravity of the situation and the deadly nature of the disease was at once appreciated, and the fact soon became apparent that they could not cure it. Hence, every effort was made to stamp it out by measures of prevention rather than cure. Exhaustive study and investigation showed that the disease was epidemic in certain districts and localities; these were noted and indicated by shaded areas on maps which were issued for the information

and guidance of all concerned. No military animals are allowed or kept within these districts, and grass is never cut therein for military use. The grazing of animals on the road or in camp is absolutely prohibited, except in places known to be uncontaminated, and pack animals which are not under individual control are provided with a muzzle, a practice which could be introduced in the Philippines with great benefit. It was a noticeable fact that surra many times appeared amongst the ponies of native grass cutters and attendants, who do not observe any precautions, without a case amongst military animals. In regard to water, great precautions have been taken to avoid danger from this source, even to digging wells on routes through infected districts, which native stock are never allowed to use, and to boiling the water under specially unfavorable conditions. Contact with native stock is avoided as far as possible. Even at this late date, when surra has not appeared among military animals for many years, mounted organizations marching to take part in the recent coronation ceremonies at Delhi, were required to make considerable detours to avoid passing through any of the infected areas.

In districts where the disease is epidemic, it will be impossible to prevent sporadic cases, but the spread of disease to government stock can be prevented by prompt precautions, and to this end all energies should be bent. As it is believed that the disease is endemic in the Philippines, every effort should be made to find out infected areas and similar precautions taken in regard to them. It will be practically impossible to maintain a mounted command in such a district without frequent recurrences of the disease.

It has been found impossible to learn whether the natives hold to any theory in regard to the origin of the disease here, but the low grounds were evidently regarded as dangerous during the rainy season, for it was the custom to drive all stock to high ground after the crop was planted, and, as far as possible, before the heavy rains began; but on account of the insurrection, and later the ladrones, this has been impossible for the last five years, and stock has been kept in the

lowlands, feeding and watering in the old rice paddies, overflowed and swampy lands, with the result that in many districts native ponies have almost entirely disappeared. When driven to the hills a few animals would die, evidently infected in the lowlands, but cases did not originate, and the disease gradually died out, mountain streams and upland grass in the nature of things not harboring the parasite.

Native veterinarians do not regard this disease as necessarily fatal; in fact, they claim to be able to cure it in many cases, but it is a fact within the knowledge of the board that they have always failed to do so in a determined case. The knowledge of this disease which is generally claimed by them is not consistent with the theory of its recent introduction into the Islands. They seem to be able to relieve an animal temporarily, and in several cases have returned it as cured; but a relapse invariably occurred in a few days, and the disease followed the usual course. So far as is known, no permanent benefit has ever been derived from treatment by native veterinarians. Being ignorant of the true nature of the disease, and having no means of determining it absolutely, it is evident that if any cures have been effected, the disease has not been surra. They are very secretive as to their treatment, and will not undertake to cure any animal unless it is turned over to them and taken away. What means of drugs they employ, if any, is so far unknown

As this disease was unknown in the United States, and as our American text-books touched on it very lightly, if at all, our veterinarians and army officers generally on arrival in the Philippines, were wholly ignorant of it, and excusably so. It is not, therefore, surprising that it was not recognized when it first appeared, and that many American animals died before anything definite was learned. It is surprising, however, that it should have been so generally diagnosed as glanders; for such a gross error as this there seems to be no reasonable excuse on the part of veterinarians; but it is undoubtedly true that a great majority of the earlier cases were falsely diagnosed, and animals destroyed without knowledge of the real disease being increased one particle. As surra is invariably fatal, this error in judgment was not expensive,

as far as animals actually suffering from it were concerned; but the dread which glanders inspires in the minds of most veterinarians and officers led to further false diagnoses in the cases of animals suffering from lymphangitis, influenza, catarrhal troubles, etc., all tractable diseases; but the animals were ruthlessly destroyed; ignorance and fear of responsibility cost the government many animals. It is also true that some veterinarians did not make this mistake, notably Dr. Faust, but regarded surra as an entirely new disease, and endeavored in various ways to treat it specifically, but without success. As is usual in such cases, it has been announced from time to time that a given treatment has proved successful; every treatment, however improbable or absurd on its face, has been given a fair trial at the quartermaster's corrals in Manila without success.

The first mortality amongst our quartermaster's animals that attracted and received special attention, occurred in and around Manila during and following the rainy season of 1901; native animals were also dying in this part of the island of Luzon in great numbers, and had been for many months previously. The fact that the disease was probably due to the presence of a specific parasite in the blood was made known in October, 1901, but the parasite, though determined, was not recognized, and was generally considered to be entirely new.

Dr. J. G. Slee, assistant veterinarian, board of health; Dr. J. J. Kinyoun, surgeon U. S. marine hospital service, and Captain Allen M. Smith, assistant surgeon, U. S. A., were all identified with the discovery of the parasite, but it is difficult to assign the credit to any particular one. It is understood that the identification of the parasite was the result of a pure accident. The army medical officer in turning over the pages of a work on bacteriology, wherein the disease was described, found the parasite illustrated. The parasite having been discovered and identified, the attention of all turned to the treatment in the hope of finding some means of destroying it. It may be said in brief, that most of the germicides have been employed subcutaneously, intravenously and through the mouth without success. Sub-

cutaneous treatment was almost immediately abandoned, because the powerful drugs employed almost invariably caused serious local ulcers.

Whatever doubt may exist in the minds of some as to the origin of surra, it has been universally recognized as a wet weather disease; it disappears almost entirely in the dry season here and elsewhere, only sporadic cases occurring, undoubtedly transmitted from case to case by inoculation through the agency of flies or other biting insects. Such insects are doubtless responsible for many cases, more than was at first supposed. It is recognized that they are much more numerous in wet weather, but they are never wanting, even in the driest season, in sufficient numbers to perpetuate the disease in any stable or locality, once it appeared there; whereas it disappears entirely in many stables and localities during the dry season, which fact clearly points to some other source of infection.

The fly theory is founded upon successful experiments and can be accepted as proved. It accounts for the spread of the disease after once introduced, but as it everywhere disappears almost entirely during the dry season, it is difficult to understand how it is kept alive from season to season, especially as it has been found impossible to detect parasites in flies that have been kept from surra cases twenty-four hours or over. In this connection it has been suggested that wild animals may have the disease in a chronic form, like cattle, and not dying, may perpetuate it from season to season. The idea is plausible, but information as to the existence of surra in wild animals is almost entirely wanting, and admitting that they carry the parasite, will scarcely account for the serious outbreaks that have occurred here and elsewhere, as contact is essential to the spread of disease by inoculation. With cattle, the case is quite different; their blood may swarm with parasites, but they rarely die, and may harbor them for months or years, and thus bridge over the interval from one wet season to the next, or much longer intervals. Contact with other domestic animals is also assured, and fleas or biting insects may do the rest. This is a most important fact, and should receive special attention in

the Philippines. The presence of parasites in the blood of the cattle can be readily detected by microscopical examination, and infected cattle are a great source of danger to animals in which the disease is fatal.

Surra is unquestionably due to the presence of the *trypanosoma evansi* in the blood, but it is admitted that there is some difference of opinion as to how the parasite gets there, and where it comes from. It must have an origin, and there is overwhelming proof that its recurrence is always during or following a wet season, and in localities subjected to overflow or containing marsh lands; and, what is equally important, that it disappears when these conditions no longer exist, either naturally, as in the dry season, or from improved drainage and proper precautions in regard to food and water. It is therefore impossible to ignore such important facts or to avoid the conviction that conditions under which the disease invariably recurs are responsible for its existence. The parasite cannot exist except in wet or damp places, and it is quite certain that when in the dry season the surface water disappears by evaporation, many of them die, and others in some form, follow the moisture below the surface and disappear from grass entirely. They are thus dormant until a recurrence of the moist conditions (rainy season) brings them to the surface; and both water and grass growing in it may convey the disease to any susceptible animal consuming them.

That the disease is spread by inoculation through the agency of flies and biting insects, and probably fleas and lice from rats which are frequently found infected, is no longer disputed. In fact, this agency is credited to-day with many more cases than formerly. Diseased blood is carried mechanically on the proboscis or feet and legs of flies, and is usually introduced into an animal through an abrasion or open wound of some kind, but it is extremely probable that the boring apparatus of the fly, as it punctures the skin, carries infection with it. Flies congregate in great numbers on animals suffering from surra, and apparently suck up blood faster than they can consume it, and an animal of light color

will appear covered with small spots of blood and flies standing in them; their feet and legs thus become covered with diseased blood, and, if they alight upon the abraded surface of a well animal before the blood has had time to coagulate and destroy the parasite, it will undoubtedly pass into the blood of the animal, and surra will result in a few days. To avoid infection from this source it is absolutely necessary to protect animals from flies. The sick being usually fewer in number, it will be simpler to prevent flies from biting them, and this will usually be sufficient when only a few cases exist, provided prompt measures are taken to isolate all suspects; otherwise protection should be provided for all.

Cleanliness is a great measure of precaution, and should be rigidly enforced; the stables and grounds in the vicinity should be thoroughly drained, and no stagnant water should be accessible to stock. It is during the latent period that danger is greatest, because unrecognized, and frequent tests as to temperature and condition of blood should be made, that animals in that stage of the disease may not be left in contact with the well; determined cases should be destroyed at once.

Rats are quite susceptible to the disease, and when it is around generally contract it. Animals inoculated with the blood of such have contracted the disease in a virulent form and died in from two to seven days, with frequently a long period of incubation. This fact led to experiments with excreta of rats, in whose blood the parasite had been determined, as to whether if mixed with grain it would produce the disease. It has also been claimed that the disease has been produced by rat fleas. As sources of infection, the above seem rather remote, but accepting Dr. Lingard's experiments as conclusive of the fact, it becomes necessary to protect all forage from the ravages of rats, and, primarily, the destruction of the rats themselves would remove all danger.

Working upon the theory that the disease was communicated by water and grass, the government of India has succeeded in exterminating the disease entirely from India, Burma and the Straits Settlements. Green forage is seldom

fed to animals, and never unless it is grown upon thoroughly drained land and under military supervision. Everywhere great piles of dried grass or hay were found stacked, as the generally expressed opinion was that the disappearance of surra was mainly due to its use. Government farms exist in various parts of the country, and mounted organizations marching from point to point seldom rely upon grass cut on the road. It may be stated that finally Lingard, Evans and other experts hold to the above theory, and in view of the result obtained there and our unqualified success in the Philippines, we could not do better than accept it and fight the disease on similar lines. The opinion, even of experts, unbacked by results, would prove very little. We must have results following the application of any theory to make it tenable. As stated, the theory has generally prevailed in India and Burma that water and grass are the original sources of infection, flies being regarded as spreaders, but not originators of the disease, and efforts based entirely upon this theory have resulted in the extermination of the disease so far as military animals are concerned, and cases are very rare amongst private stock.

In a new country with a new disease, it is perhaps natural that there should be much diversity of opinion, both as to its origin and its spread, but it is to be regretted that very marked differences of opinion exist here. We cannot afford to reject the experiences of our neighbors, extending over many years and resulting in the practical extermination of the disease, and accept and act on conclusions founded upon finely drawn theories, incomplete data and experience. It is useless to combat the disease on the theory that it is originally contracted through eating swampland grass or drinking impure, stagnant water, and ignore the great probability, in fact, absolute certainty, of inoculation by biting insects. The converse of the proposition is equally true. All possible means of infection have got to be taken into consideration, and a uniform and comprehensive system of fighting this disease adopted by both civil and military departments involving both public and private stock, or we shall have it with us always. Differences of latitude and altitude have

been found to exert very little influence upon the contraction of the disease, if the topographical and climatic features are favorable, and none at all upon determined cases so far as the result was concerned. But cases have not been known to originate at an elevation of 7,500 feet and higher, yet even this elevation has no effect upon determined cases, but does influence the progress of the disease, in that parasites are fewer in numbers and paroxysmal periods more continuous. This important fact was communicated by Dr. Lingard, founded upon his most recent investigations.

Surra has been defined as a specific and continuous infectious, febrile disease occurring in solipeds (solid hoofed animals) and camels, and capable of being transmitted by inoculation to other animals. It is due to the presence of a specific flagellate parasite in the blood. The fever is caused by irritation due to the presence of these organisms. The fever is of an intermittent, remittent and sometimes relapsing type, and continuous for varying periods from a few days to months, depending upon the animal attacked, its physical condition at the time, and the treatment it receives from the earliest indications. Animals which are worked after fever sets in, fail very rapidly and pass almost immediately to the final stages of the disease, many of the intermediate symptoms being entirely absent. Surra is found especially in horses, asses and mules, but is not confined to these species. Outbreaks have occurred among camels and elephants in India; cats and dogs are also commonly affected, the latter in the Philippines contracting the disease by licking the blood of animals that have been shot. It has also been transmitted by inoculation to cattle, buffaloes, sheep, goats, rabbits, guinea pigs, rats and monkeys. In camels, the disease generally assumes a very chronic type and lasts for months and even years. It is a fact that a camel which survives three years very frequently recovers.

The blood of cattle may swarm with it without apparent harm, and they do not die. The parasite was generally found in the blood of carabaos in Southern Luzon at a time when they were dying in great numbers, supposedly of rhinderpest. In no case was the parasite present in great

numbers, and it is not believed that it is always fatal; but that they do die of it, has, it is believed, been fully proved in Manila and elsewhere. Sex plays no part in regard to susceptibility, as both horses and mares are affected; age very little, and breed none at all, except that in India it has been found that Australian animals are much more subject to the disease than Asiatics. This fact deserves great consideration in the Philippines, in view of the considerable number of such animals now there and annually imported from Australia, and the fact that the period of incubation, under certain circumstances, greatly exceeds the duration of a voyage from Australia. Highly bred and high strung animals yield more rapidly to the disease than common stock and those with a phlegmatic temperament.

Our experiences in the Philippines show that horses and mules are alike susceptible, but it is probable that color has nothing to do with it further than regards its attraction for flies. Observation has shown that a white animal amongst a lot of dark colored ones infected, will receive much the greater share of attention. The limits of infectivity of surra are not yet determined, hence all mammals must, for the present, be regarded as possible carriers of the disease until negative experiments prove them to be refractory. There is no such thing as immunity by becoming acclimated or otherwise. G. H. Evans states most emphatically "that the popular idea regarding immunity of the indigenous ponies in Burma is a fallacy, as they all die equally with other breeds, as also did the Panthe mules which are bred in the northern and Chinese Shan States; so much so is this the case that hardly a mule or pony escapes in the upper Irrawaddi and other districts; so that all hope in the direction of naturally acquired immunity in breeds is lost." Experience in the Philippines fully corroborates the above opinion. Native stock is even more susceptible than American animals, owing doubtless to impaired vitality due to insufficient and no nutritious foods and hard work added to general neglect.

Dr. Lingard informed the board that the parasite had not yet been found upon grass cut from swampy and overflowed lands, but had been found in the stagnant water re-

maintaining after a high water period. As far as known the parasite has not been determined in either, in the Philippines, but investigations in this direction have been very limited. Both water and grass may, and probably do, harbor the parasite in its immature form which, as has been stated, cannot be detected by microscope. Impure water is therefore a more dangerous source of infection than grass; both will have to be avoided if a recurrence of the disease is to be prevented.

The symptoms are very numerous, but very marked, and with experience we should be able to diagnose the disease by the symptoms alone. It is a fact, however, that the two absolutely certain ways of diagnosing the disease are the determination of the parasite in the blood by means of the microscope, and the reproduction of the disease in other susceptible animals by inoculation; in the absence of a microscope the latter plan should be resorted to. The symptoms vary with a great many circumstances; first, as to method of contraction, whether naturally or by inoculation. When acquired in the ordinary way the onset of surra is that common to all low forms. Lingard gives the most complete summary which has yet been published, and, as it cannot be well improved on, it is in general followed, in so far as it is applicable to this disease as it has developed here. For complete analysis, see Lingard's own report, 1893, or as reproduced in "emergency report on surra."

The first stage of the disease is not usually marked by symptoms of a serious character. The skin feels hot; there is more or less fever; the appetite may be capricious, and the animal appears dull, and stumbles during action; but for several days there is nothing to indicate serious illness.

A most difficult point to clear up, and one which up to the present time has not been recorded, is the latent period of surra in cases in which it is contracted naturally; that is, the time which elapses between the introduction of the cause into the system and the first appearance of the parasite in the blood of the general circulation. This difficulty can be more readily understood when it is recognized that the forage or water or both are, in all probability, the source of in-

fection, that it is generally impossible to fix the inferior limit of time, and that when the symptoms of the disease become apparent the animal may be in an entirely different part of the country. This matter of incubation period is of great importance with reference to the time that suspects should be isolated, especially animals that have been in contact with the disease.

A symptom which usually appears early in the disease, and is of great importance in that it may be the first indication of indisposition, is the appearance of a general or localized urticarial eruption resembling nettle-rash or hives. These may be the only symptoms noticeable until the parasite is determined. The blood will appear normal, and under the ordinary treatment for fever the animal frequently improves in health and spirits. This condition lasts for only a few days, and with the first appearances of the parasite the animal is again dull and dejected in appearance, and well marked symptoms appear. If the blood be examined microscopically, a few small but rapidly moving organisms will readily be seen, giving to the blood as they pass among the corpuscles a peculiar vibrating movement, which once observed will not easily be forgotten. At this second stage of the disease the skin is very hot, with marked rise in temperature, 101° to 104° and over, 56 to 64 beats per minute; the visible mucous membranes may appear clean, but the conjunctival membranes, especially those covering the *membrana nictitans* (third eye-lid) usually show dark red or claret-colored patches, of varying sizes in different animals. This symptom is especially characteristic of surra, though found in other animal diseases. There is more or less thirst, and possibly a slight loss of appetite, or rather discrimination as to food consumed; but this symptom is not common in the Philippines, an appetite which may be called "ravenous" existing from almost the beginning of the disease to the end, even during the high fever periods; a quite unusual condition, but peculiar to surra.

There are slight catarrhal symptoms present, including lachrymation (very common), and a little mucous discharge from the nostrils. At this period of the disease, in a consid-

erable number of cases, the submaxillary glands will be found swollen and sensitive to touch, but not closely resembling the same symptom in glanders. It is the swelling of the glands and the mucous discharge from the nose that has led to the diagnosis "glanders." While this disease closely resembles malaria in the human subject, Dr. Lingard remarks that one symptom is markedly absent—any signs of chilliness. This is equally true of cases here. At an early stage of the disease it will be noted that there is some swelling and edema of the extremities, generally between the fetlock and the hock, with a tendency to involve the entire leg, which pits when pressed with the finger, but does not appear especially sensitive; also in males some swelling of the sheath. There is one symptom which can be said to be universally present from the determination of the parasite to the end, viz.: the rapidity with which all animals lose flesh, especially about the loins. From first to last there is progressive anemia, with more or less ulceration externally from this cause. Dr. Lingard says that anemic ulcers are not frequent in cases in India, but in the Philippines they generally appear at some stage of the disease.

If the blood be examined microscopically daily, it will be seen that the parasites gradually increase in number until they are literally swarming, the period varying from one to five or six days, in which condition they may remain one or more days, when they gradually or suddenly disappear entirely. With the disappearance of the parasite, the temperature lessens until normal, or even subnormal, is reached. If the parasites disappear suddenly, the temperature drops in the same way from 104° or 105° at night to nearly normal the next morning. It will thus be seen that the disease is characterized by periods of paroxysm, when parasites are always present, accompanied by fever in proportion to the number and periods of apyrexia or intermission, in which there is neither fever nor parasites, also of varying length. It may be stated as a law, that the amount of fever varies directly with the number of parasites present. During fever the temperature rarely falls to 102° Fahrenheit, but is generally 103° or over. In but a single instance within the knowledge

of the board have parasites been found in the blood with a subnormal temperature; this was the case of a mule at Camp Vicars, in the pink of condition as far as external symptoms went, but showing a very few parasites in the blood in the morning examination for four or five days, with temperature of 98° or very slightly over, the evening temperature always being four to four and one-half degrees higher. The case bears out Dr. Lingard's explanation in regard to cases in the hill country of India, Camp Vicars being at about 3,000 feet elevation and having a cool climate.

During the intermission periods an animal frequently improves in appearance, and external symptoms are more or less modified; and, but for loss of flesh and edema of the extremities, there is little to show that it is seriously affected. With each recurrence of fever and parasites, all symptoms grow worse and worse; the animal becomes more and more dull and dejected, until its nose is almost on the ground, and it makes no effort to remove tormenting flies which swarm on it; in fact, muscular power over the skin seems lost. The visible mucous membranes become yellow, and dark spots appear on the conjunctival membranes; the action of the heart is irritable and at times irregular; the breathing is quickened and irregular, being more abdominal than thoracic in character; and in noting an animal at this stage, it will be seen that it makes seven or eight short respirations, which are followed by a more prolonged or sonorous one. The swelling and edema increase, and serum sacks under the belly, often of very large size, are formed, extending from the sheath to the forelegs; the swelling of the sheath is greatly increased; it is enormous in size and nearly trailing on the ground; the penis is much swollen, and there is a constant tendency to erection, and what is called "horsing" in mares. The periods of alternating paroxysm and intermission may go on for some time; the progress of the disease is variable and greatly depends upon the condition of the animal attacked, the weak ones failing very rapidly; but each return of fever increases the severity of the symptoms. During the progress of the disease the wasting away is con-

tinuous, until the animal is literally nothing but skin and bones.

In the Philippines, a more or less tendency to constipation has been noted in the early stages of the disease. Diarrhoea is not common at any stage, but is extremely offensive when it does occur. Towards the termination of every case the animal shows great disinclination to move; there is a manifest loss of power over the hind quarters, which reel from side to side if the animal is forced to move, accompanied by a dragging of the hind feet, somewhat resembling paralysis. There is also frequently present paralysis of the *sphincter ani*, and a dilated condition of the anus. Numerous post-mortem examinations show that up to the end of the disease animals seem to digest their food very well, but there is also a partial paralysis of the lower bowel and rectum for some ten or twelve inches, as they are unable to eject their excreta; it gets stalled at a point eight or ten inches from the anus, and muscular efforts to dislodge it cause secretion of considerable mucus.

Dr. Lingard says that the above symptoms, taken together, point to some interference with the normal functions of the spinal cord in the lower dorsal and lumbar regions, and are probably due to pressure caused by an exudation within the spinal membranes. However caused, they were amongst the most pronounced symptoms. In many cases, shortly before death, the action of the heart becomes so violent, that it shakes the body and can be heard at some little distance. Death occurs in several ways: The animal may drop dead from a standing position, or may drop and die after a short struggle; or, being down from weakness, death may occur after a series of struggles, in which the animal apparently suffers intense pain, and may sweat profusely.

It must not be expected that all animals will exhibit the symptoms given above or run closely approximately thereto. As near as can be determined, they represent a normal case, departure therefrom being due to the varying conditions of individual cases. Some of the visible symptoms will certainly be present, and the microscope will settle the matter beyond dispute. Fever will always be present, and surra

having appeared, a temperature of 101° or over without assignable cause, must be regarded as suspicious. As a safeguard, the temperature of all animals should be taken daily, preferably towards night, and all suspects should be promptly isolated. As has been stated, the onset of the disease is so insidious that the animals may show no pronounced symptoms until the appearance of the parasite, and much time may be lost, during which the contagion may be communicated to other animals.

In the case of animals contracting surra by inoculation, an opportunity is afforded for studying the progress of the disease, and data are necessarily more exact, but the conditions vary so much in different animals and depend so much upon the way in which the disease was communicated, that no general law can be enunciated. The results of an elaborate series of investigations in which surra has been reproduced are given in "emergency report" previously referred to; no such exhaustive study has yet been made by the military establishment in the Philippines, but there is no reason to believe that the disease so induced would take any different course here.

Blood, serum and body fluids have been used for inoculation intravenously, subcutaneously and through the mouth, and by smearing an abraded surface, all taken from surra cases before and after death, and the disease has been reproduced in every case. If taken anti-mortem and during a paroxysm the number of parasites in the blood is important, as, when very numerous, the disease is reproduced in much less time than if taken during an intermission or apyriaxial period, when parasites cannot be demonstrated in the blood. The disease has also been introduced by infected blood administered in drinking water, but this method has frequently failed, and it is not believed that surra will result, unless the animal has a cut or abrasion of some kind through which the parasite comes in direct contact with the blood. This is doubtless true with regard to water and grass as original sources of infection, and will account for some animals contracting the disease and more escaping, where all are watered and fed in the same way.

It may be as well to state here, that blood from a determined surra case, even though the most searching microscopical examination does not reveal a single parasite, will always reproduce the disease, a fact which seems conclusive as to the existence of the parasite of surra in some other than the matured form in which it is always seen; in fact, it is now generally believed that it does exist in an immature form, not visible under the microscope, and hence indeterminate and so far intractable. If taken post-mortem, the number of hours after death, the quantity of blood or fluid introduced, and the method of inoculation, all influence the result.

A single illustration of the result of subcutaneous inoculation of a small quantity of surra blood as given by Dr. Lingard will suffice. Twenty-four hours after inoculation a small and somewhat raised swelling is noticed at seat of inoculation; after forty-eight hours, the tumor has increased in size, with edema and tension of parts involved, and is generally tender on manipulation. The fourth day the tumor may measure three inches or four inches by two inches or three inches, one inch to one and one-half inches high, and is quite movable. These symptoms will vary under the conditions noted above, until from the fourth to the thirteenth day the tumor will be found to have lost a certain amount of its tension and tenderness; after this, the swelling and edema will gradually grow less, and from the tenth to the fourteenth day there will be nothing left but a slight thickening of the skin over the point of injection; but at the moment when tenderness and tension suddenly decrease, a symptom of importance clinically takes place, viz.: at that moment the organism of surra enters the blood of the general circulation. Up to this time the disease has been completely localized and the ordinary operation for tumor will remove it. Fever may supervene on the day of inoculation, or not for several days; the indications may be very slight, or there may be a considerable rise lasting two to six days; but at the time the parasites enter the blood there is always a decided rise, 103° and over, accompanied by all the symp-

toms noted in cases contracted naturally, and from this point the progress of the disease is practically the same.

In summing up, Dr. Lingard says :

"The fever of surra varies to such an extent in different cases, that it is impossible to group them under one system of description as regards the stages of the disease. The insidious nature of the onset in naturally contracted cases devoid of symptoms during a considerable period, renders it impossible to recognize it, until such time as the organism enters the blood. Consequently little is known concerning the latent period and stage of invasion, and in such cases, when untreated, the form is of a continued type, with more or less intermissions at long, but irregular intervals, ten or more days. If, in untreated cases, the paroxysmal periods were regular the life of the parasite would be known, as the termination of this period announces the destruction or disappearance of the matured form ; but the number of such paroxysms an animal will survive and their duration, vary with each case."

Young horses in good condition may pass through nine or ten paroxysms, and cases have been known to linger along for as much as a year, while in some cases, notably old and worn-out animals and those that have been overworked or subjected to unusual exposure, the course is very rapid, and may be one or two weeks or less. In India, average duration for different outbreaks is variously given as forty-three days, not less than two months, one month or more, and fifty-two days. In the first volume of Lingard's report a précis of numerous cases acquired naturally and artificially produced is given, containing much useful information and showing the variations in individual cases.

TREATMENT.

It is obviously imperative that the existence of the disease be detected at the earliest moment possible, and the animal put under treatment at once, the rapid destruction of the parasite being the point of greatest importance. Most animals fail so rapidly after the appearance of the parasite that a single day will make all the difference in the world, and unless the animal is in good condition as to flesh and

strength, it is perfectly useless to attempt treatment. On account of the deadly nature of the disease, treatment should only be attempted under the most favorable conditions ; that is, when the animal can be completely isolated and protected from the weather, flies, etc., and fed all it will eat ; under the usual conditions of service animals should be destroyed at once. In brief, then, treatment has so far failed. Lingard has experimented with the following drugs, with the results given :

Mercuris chloride has been employed subcutaneously, and also by direct injection into the circulation, with negative results.

Iodine and iodide of potassium by intertracheal injection, and also by subcutaneous inoculation, followed by negative results.

Iodoform by subcutaneous injection, and also by direct injection into the jugular, produced no good results.

Oleum terebinthinae by subcutaneous injection, and by injection into the jugular, was followed by negative results.

Potassi bichromas, direct injection into the circulation and by gastric ingestion, produced no marked effect on the infusorian.

Mixed cinchona allaloids and arsenic did not destroy the infusorian.

Carbolic acid and iodine, 76 drams of the former and 34½ drams of the latter in six days, produced no apparent effect on the infusorian.

Quinine in large doses had no effect on the infusorian.

Iodic hydrarg, a very powerful antiseptic, had no effect.

Santonin had no effect.

Potass had no effect.

In the Philippines pretty much all the foregoing have been used with negative results. Also powerful salt solution, formaldehyde gas, sulphur, etc. Bichloride of mercury injected either in the muscular tissues or intravenously arrests the disease in every case and destroys the parasite ; the animal almost invariably improves in appearance, and for a few days is apparently better ; but the use of this drug cannot be persisted in, as symptoms of mercurial poisoning ap-

pear, and it destroys the red blood cells about as fast as the parasites reappear, and the animal fails very rapidly. The only drug that so far promises any return is arsenic, and three cures in India were effected by the administration of arsenic and iodide of arsenic and mercury. The only case believed to have been cured in the Philippines was effected by the administration of Fowler's solution of arsenic intravenously, and tonics of iron, quinine, etc.

As early as January, 1902, the board investigating surra in the Philippines reported that arsenic administered intravenously destroyed parasites in nearly every case, and that animals so treated were doing well. Treatment not conclusive as to cure. More extended inquiries showed later that the improvement was only temporary, and that animals invariably died after a period, depending upon their ability to stand the arsenic treatment, with the single exception of the mare mule noted above.

The following treatment is the only one known which gives the least promise of a successful issue: Arsenic in the form of Fowler's solution, the maximum dose depending upon weight and condition of animal treated. Commence with five grains, given twice daily for forty-eight hours, the quantity being increased by half a grain after every four doses have been administered, until seven grains are reached. The latter amount should be continued twice daily for seven days for animals under 800 pounds in weight; for animals of 1000 pounds or over, the dose may be increased by the addition of half a grain up to nine or even ten grains twice daily for the same period. The dose should then be gradually reduced by half a grain to one grain, according to condition of patient until a five-grain dose is reached. If the condition of the animal permits, repeat the treatment after a period of two days, increasing and then decreasing the dose of arsenic as above described. But the fact must never be lost sight of, that if the arsenic be administered to an animal for a prolonged period, symptoms of gastric irritation will sooner or later appear, and there is always danger of cases suddenly developing symptoms of chronic arsenical poisoning. These are usually effected by partial loss of muscular power with

great unsteadiness and nervous tremors, and usually prove fatal in forty-eight hours, even though the use of the drug is discontinued at once. Acute nephritis is a common complication of surra, but it must not contra-indicate the administration of arsenic, although the maximum doses cannot be maintained, otherwise the animal will relapse and die. Daily microscopical examinations of the blood should be made, and the number of organisms recorded on a chart for ready reference, as "none," "few," "numerous," "swarming," together with the temperature, pulse and respirations of the patient, which should be taken three times daily, say at 8 A. M., 1 and 5 P. M.

Most animals will take the drug in water without trouble; excessive thirst is usual and if the water is withheld for some time they will drink it freely. If refused, it can be mixed with the feed, and in very obstinate cases, administered in the form of a bolus or draught. The compound tincture of lavender is sometimes added to the solution to make it more palatable.

After the parasites have disappeared from the blood for several days, the animal should be gently exercised, short distances at first and gradually increased to one mile, provided no unfavorable symptoms recur. If the temperature rises, all exercise must be stopped, and should never be allowed as long as parasites are demonstrated in the blood. If the case progresses favorably, the edema of the lower extremities, sheath and under surface of the abdomen should disappear gradually under the influence of the arsenic and exercise; this may be accelerated by daily massage of the body and limbs. The above treatment advocated by Dr. Lingard is the only one known that offers any prospects of success, even under the most favorable circumstances, and only in cases of animals able to stand the prolonged treatment with arsenic. It took months to cure the few cases known to have survived.

After twenty years' experience with the disease in India and Burma, notwithstanding the vast amount of investigation, study and experiment devoted to it, no treatment worthy of the name of cure has yet been discovered; the same

want of success has attended, so far, all efforts in the Philippines.

It has been suggested that the administration of arsenic to all animals as a measure of precaution at the commencement of the rainy season, especially to those likely to be exposed to infection, is worthy of attention and trial. This idea is founded upon common sense, as arsenic certainly destroys the matured form of the parasite, and there seems good reason to believe that an animal would be more refractory by its use as a prophylactic measure.

Post-mortem examination does not show any structural disease. Structural changes are not found in the kidneys, liver, spleen, heart, lungs or mucous membranes of the stomach and intestines. According to Dr. Lingard there is no specific lesion present. Organs and tissues are in the anemic condition, and abscesses are usually found in the stomach and abdominal cavity. Evans is of the opinion that in all cases of death from chronic surra, or in animals that have been destroyed after the disease has lasted some time, ulceration of the stomach, more or less extensive, will be seen post-mortem. The pericardial sack and pleural cavity are generally full of serus fluid, but inflammation is not present; ante-mortem clots are found in the heart.

LETHALITY OF SURRA.

All authorities are now afraid that surra is invariably fatal. Untreated cases are hopeless and all treatments have, so far, failed. But three cases are known to have recovered under treatment in India, and possibly one in the Philippines. It is a peculiarity of this disease, that a cure does not result from the destruction of the natural form of the parasite in the blood, and it invariably reappears after a variable interval, with fever and all concomitant symptoms. This fact points to the existence of the parasite in some other than the matured form shown by microscopic examination, which is not destroyed by the germicide, and remains in the system after the disappearance of the latter. The matured form can be destroyed in several ways, but beyond this point absolutely no progress has been made in the treat-

ment of the disease. Of the immature or "resting" form, so called by Dr. Lingard, but very little is known, and, so far, it has been found impossible to combat or destroy it; until this is reached it is obvious that the disease is necessarily fatal. The reason of the disappearance of the parasite from the circulation even in untreated cases at irregular intervals, has been earnestly sought for; during the intermission periods the most searching examinations of the blood reveals nothing until the matured form reappears. The parasite multiplies by division, sometimes longitudinally and sometimes radially during the paroxysmal periods, until the blood is literally swarming with them, and then they suddenly disappear. From the similarity of the disease to malaria, the theory that the parasite itself secretes a toxin which finally destroys it has been accepted by many.

Dr. Lingard stated to the board, that it was his belief, formed on his most recent investigations, that the parasite secretes a toxin during the paroxysms which increases with the number of parasites until it ultimately destroys them, and then passes off through the urine. Discoloration of the urine during the intermissions has been noticeable, and dead parasites have been determined during the time the toxin is present in the blood and passing off. During this time the resting form of the parasite retires to the bone marrow, spleen, or organs, and remains until the toxin has disappeared; it then returns to the circulation, becomes active, matures very rapidly and commences at once to multiply. Dr. Lingard has noted subdivision going on within a few hours after its reappearance. Hence, recovery unaided is impossible, and by no treatment yet devised have investigators been able to reach the resting form.

PREVENTION.

As we cannot cure surra, our greatest efforts should be devoted to prevention, both as to contraction and spread of the disease. Until experience has determined the districts and localities through the islands in which the disease is endemic, this will be most difficult. Hence the absolute necessity for acquiring this information as soon as possible.

So far as such districts are concerned, there seems to be no remedy save the one applied in India and Burma, and that is to avoid them entirely. We must also adopt their rule in regard to green forage, that is, feed none but that grown under competent supervision, or known not to be infected. If, as is believed, green forage under a stated condition is an original source of infection, all other measures of prevention are powerless to stamp out the disease, as long as we continue to feed it. It seems to be the part of wisdom to discontinue feeding uncured grass entirely, until we have acquired more complete knowledge as to which is harmful and which is not. As a matter of fact, the greater part of the grass supplied under contract is of such inferior quality and contains so little nutriment, that the small quantity now fed could be discontinued without detriment to the animals.

The same precautions must be taken in regard to water, and animals must not be given or allowed to drink impure or stagnant water; this is even a greater source of danger than the grass, and carelessness in regard to it will make all other precautions useless. All stagnant water in the vicinity of stables, corrals, etc., should be drained away. This simple precaution in India has, in several recorded cases, stopped the disease by removing the cause. Animals should not be grazed in localities where they can get at stagnant water, and on the march, or in the field, animals not under individual control, should be provided with muzzles. Contact with native stock should be prevented in every way possible, and where the military control the situation should be prohibited.

The application of some such system as that suggested above can alone control the situation so far as native stock is concerned. With the above precautions taken, there remain the measures necessary to prevent the spread of the disease when it appears in spite of them, as will doubtless be the case for some time to come. Prompt recognition of the disease and the immediate isolation or destruction of the animal, are the measures of first importance.

Surra having appeared in a stable or corral, all animals therein are under suspicion, and should be critically exam-

ined daily; temperature should be taken at least once daily, preferably in the afternoon, and any animal having fever 101° or over, without well defined cause, should be immediately removed, and no contact permitted with any other animals till the case determines. The blood of all animals with fever should be carefully examined daily, and, upon the appearance of the parasite in any case, it should be destroyed at once or removed to as great a distance as possible. Animals which do not develop surra should not be returned to duty until they have shown no fever or parasites for at least ten days. Animals arriving at any stable or corral, especially if coming from an infected district, should not be allowed to mix with stock on hand, till they have been held under examination a safe interval, say thirty days. The difference in detention periods suggested is due to the fact that the disease would in all probability spread by inoculation in the first case, when the incubation period is much shorter; while in the latter case, if surra appeared, it would be more than probable that the disease was contracted naturally, with a much longer incubation period. When surra prevails in any district, animals should not be moved round from station to station more than is absolutely necessary, and animals under suspicion of surra should not be moved at all. Experience in the Philippines has been particularly unfortunate in this respect, but now that the number of stations to be permanently occupied is practically fixed, the necessity for constant changes no longer exists, and data as to the infection or otherwise of any station can be acquired.

THE FRENCH SCHOOL OF APPLICATION FOR CAVALRY AT SAUMUR.

BY CAPTAIN FRANK PARKER, FIFTEENTH CAVALRY.

THERE seems to be no question that the French School of Application for Cavalry, is the best equipped and best organized institution of its kind. A simple statement of the major details of this school from the standpoint of equitation will show the completeness of its equipment.

There are for instruction in equitation alone, twelve riding masters, or *écuyers*. These officers are without exception horsemen of repute, selected upon their records as such. There are in all fourteen hundred horses at the school; there are two hippodromes, and one cross-country terrain, all equipped with obstacles and tracks, for training and racing; there are four riding halls, with complete equipment.

I give these details to show the completeness of the organization and equipment of the department of equitation alone.

I shall commence with this department, as the horse is the subject of foremost interest at Saumur. Later I shall describe the other departments, none the less important, and all organized and conducted with a thoroughness that one sees in every detail of this admirable institution.

Captain Mott, in his article published in the January 1903 number of the *CAVALRY JOURNAL*, gives a most excellent general description of methods employed in the instruction of equitation at Saumur.

I shall, therefore, pass at once to a description of the system by which the high standard of rider and horse is maintained at Saumur. This excellence is due to the gentlemen of the "cadre noir," the "*écuyers*" or riding masters, cavalry officers detailed for five years in this work. I shall describe

the means by which, and the reasons for which an officer is appointed to this cadre, an appointment bearing with it a prestige of the highest order.

Let us take the case of the cavalry officer coming up from the ranks—the number of officers of this class equals approximately that of the cavalry class graduating from Saint Cyr, but they are not commissioned until after graduation



CAPTAIN DE HAATECLOQUE TAKING BAR.

from Saumur. This young man must have had at least *two* years as sergeant (this means at least four years of enlisted service in the French army), he must have been recommended by troop, regimental and brigade commanders, and *then* he must pass a competitive examination, and only two men are sent from each *brigade*. Therefore the chances are that he is an excellent man.

Once at Saumur, the year for these noncommissioned officers is not essentially different, as regards equitation, from that for second and first lieutenants; naturally, the theory is less advanced. By the end of the year, the riding masters

have had ample opportunity for remarking the qualities of each student, and in each class there will always be a half dozen or so who will be conspicuous as easy, graceful, fearless riders, good all-round horsemen, good in the manège, good on the buckers, good in steeple-chasing, and cross-country, good in horse training, good in hippology and general horse knowledge.

Granted that each man rides three hundred and fifty horses during the year, and horses of all kinds, ages and descriptions, in all sorts of work, his instructor, who watches him and notes him daily, has a very thorough idea of his capacity at the end of the year.

Next, to pass to graduate of Saint Cyr:

The system of equitation at Saint Cyr is exactly the same as at Saumur, only in a lesser state of excellence. However, in the short time that I spent at this school, one day only, I was struck with the admirable installation and arrangement of the department of equitation.

There are four fine riding halls, two large maneuver fields arranged for exterior carrière, and five hundred fine horses, thoroughbred, half-bred, Anglo-Arab, Tarbe, etc., all excellent.

The course at Saint Cyr lasts two years. During the first year infantry and cavalry ride together, and have only about one hundred and twenty hours of riding. At the end of this year the candidates for cavalry present themselves for competitive examination in practical horsemanship, and one hundred are chosen. At end of second year eighty approximately are commissioned as second lieutenants and sent to Saumur. During this second year the class has ridden about four hundred and eighty hours. Therefore on arriving at Saumur a second lieutenant has already had two years of equitation. From this point on to the end of the year, what I have said concerning the noncommissioned candidates applies to the second lieutenants.

Four or five years after graduating, one out of four of the second lieutenants, the proportion is one to each brigade, is sent back for an additional year, upon the recommendation of his colonel and brigade commander, and once again they

go through the same hard year's equitation with the additional work of kriegspiel, regulations, service in campaign, hygiene, German, etc.

Let us see how the ardent French cavalry lieutenant has passed the four or five years between his first and second course at Saumur.

France is a horseman's paradise. A mild climate the year around, a perfect system of roads and a beautiful coun-



LIEUTENANT MADAMET ON "COURAGEUX," THE THOROUGHBRED WITH WHICH HE WON THE BRUSSELS-OSTEND RACE, 1902.

try in every direction, forests with bridle paths, roads with wide margins of turf, and an agreeable ride in whatever direction one turns. Moreover, every town of France of any importance has its concours hippique each year, in which there are always one or more military prizes; also a series of races, in which one or more prizes are offered for the military. The railroads transport an officer's horse for a ridiculously low figure, and there is always a car on hand to take his horse to hunts, races and concours hippiques. Here I would say that in France all military racing is over obstacles. There is a prize offered each year at Paris for the best charger (cheval d'armes) etc., etc.

Now, therefore, a young and ambitious cavalry officer finds ample opportunities for continuing his equitation in several lines, and the officers who return to Saumur as first lieutenants for the second course, have usually ridden a great deal in races and concours hippiques, the records of all of which are carefully kept. Almost every class has three or four, or several, depending upon classes, men who have thus spent, by the time they finish their second course at Saumur, eight or nine years in close contact with every kind of horsemanship, and amidst the best horses and horsemen



LIEUTENANT DE LA BROUSSE TAKING A WALL CAPPED WITH EARTH AND GRASS.

in France. And it is from this category that the cadre noir is recruited; hence the standard of riding and horse.

I question whether there is a single *écuyer* to-day who cannot give you all the statistics concerning any horse of note in France, or one who is not familiar with all the race-courses of France.

I shall take for example our riding instructor, Captain Féline, at present captain in the Fourteenth Dragoons. Here is a gentleman who can deliver a lecture worth hearing by any audience on saddles, bridles, horse-shoeing, arrangement and care of stables, hippology, anything pertaining to the horse. He is alike at home upon the thorough-bred of the *manège*, in the delicate procedures of the *haute école*, as upon the difficult half-bred hunter in cross-country

or the training of an unbroken colt; in brief, the complete horseman. And this completeness arises from two sources, both of which are essential to the officer who is to be a good instructor of equitation. First, a natural love of the horse, and second, years spent in the practice and study of the theory of equitation and all that goes therewith, and this under masters as efficient as Captain Féline is to-day.

The riding masters not only teach practical equitation,



RIDING INSTRUCTOR TAKING A HIGH HEDGE.

but profess hippology and the theory of equitation, and, in addition, train three or four (never less than three) green horses each year. The experience that an *écuyer* has had when he completes, let us say, his first term as such, is something enormous. I have already called attention to the fact that a conservative calculation shows that each student rides three hundred and fifty different horses during his year at Saumur.

The roster of the riding instructors is as follows: One instructor in chief, rank of major; six instructors with rank of captain; five instructors with rank of lieutenant.

The appointments are made by the Minister of War from the list of those officers recommended by the superintendent of the school and the *écuyer en chef*.

The term of their service as riding master is five years. This is the regulation period for all detached service, and no officer is allowed to remain away from his regiment more than five consecutive years. An *écuyer*, however, may, and usually does, return one or more times, and the chief has heretofore always served previously as instructor.



NONCOMMISSIONED OFFICER OF THE CADRE NOIR TAKING "THE RIVER."

Their pay remains the same, except for the slight increase of six dollars per month allowed to all officers on duty at Saumur.

The *écuyers* are assisted by a noncommissioned body of one sergeant major, one first sergeant, and eight sergeants. Their duty consists in the training of young horses, of horses particularly difficult, in breaking the colts, and in training and riding the sauteurs. They likewise have general charge of the stables. These men come from the cavalry regiments, and are sent to Saumur because of marked ability as riders. They remain several months on probation, and, if judged capable, may remain indefinitely, so long as they give satisfaction.

But the work is exceedingly hard; they ride as many as twelve horses in a single day, and usually the most difficult,

and after fifteen years' service they usually request retirement. This they are entitled to, and this they certainly have deserved. These noncommissioned officers are a worthy addition to the *cadre noir*. Magnificent horsemen, spending their entire day in the saddle, and passing from one horse to another a dozen times a day, I question whether they have superiors in practical horsemanship. Nothing but pure love of the horse and equitation could cause a man to undertake and pursue continuously work of this kind, and this, combined with the necessary sturdy physique, makes of these men admirable horsemen.

The noncommissioned officers, however, do not teach riding; all of the instruction is given by the officers of the *cadre noir*. But they take part in the tri-weekly rides of the *écuyers*, riding the *sauteurs*, with the lieutenants of the *cadre*.

Captain Mott has given a most graphic description of the "Reprise des *Écuyers*." I shall therefore limit myself to a few of the details of this ride. The object of the "reprise" is to keep before the eyes of the school the practical exposition of the most important branches of equitation, as taught at the school.

The "reprise" opens with the officers of the *cadre noir* mounting the highly trained, selected thoroughbreds. The movements are all at the slow trot, and are intended to demonstrate the perfect obedience of the animals to the indication of the hand or leg; the suppleness and complete mastery of the animal over his own mechanism.

The exercises consist at first of figures of various kinds, movements along the diagonals, along spirals, keeping the axis of horse perpendicular to the curve, etc. Finally, the high-school, consisting principally of the Spanish step—interrupted walk in which the members are raised and extended well forward before being planted—and the passage or interrupted trot, in which the animal pauses between steps, raising the feet high in the air and marking a distinct pause. In this latter exercise the thoroughbreds have an indescribably graceful and dainty appearance; some of them execute these steps with remarkable address and brilliancy

With the high-school terminates the work with the thoroughbreds, and the sauteurs are then brought in, mounted by the lieutenants and the "sous maitres," (noncommissioned officers of the cadre noir). The sauteurs are half-breds of the hunter type. The first movement is a rapid gallop round the hall, then a movement by the flank, a halt, and the horses at a signal rear to a vertical position; then down and away again; a few figures all at a rapid gait, and again they pause in the center of the hall, and at signal lash



CAPTAIN SAINT PHALLE RIDING A THOROUGHBRED AT THE SPANISH STEP.

out, elevating the hind quarters high in the air, then off again. A third pause, and the combination of rear and kick is effected. This results in a formidable buck, and these animals from constant practice, are able to make tremendous buck-jumps. This part of the schedule usually closes with each animal's making one or more buck-jumps in passing a certain point in the hall.

The shape of these sauteurs at once attracts attention. With very thick round barrels and great muscular development in all parts, they would appear, when not in motion, very clumsy, heavy animals; and yet, when once in motion, they are as quick and active as ponies. The peculiarity of

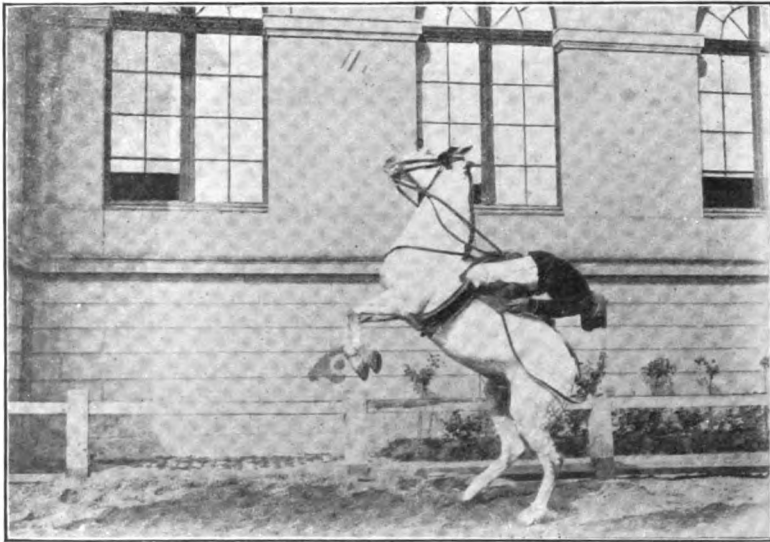
their shape arises from the constant exercise, in the "piliers" and outside, in the violent exercise of the "saut." They tell me that even a delicately built thoroughbred will thicken to such a form after a year or two in this work. There is a special saddle for the sauteurs which I will describe later.

The third and last part of the "reprise" is the work with the half-bred hunters over obstacles. In this work all officers of the cadre noir take part. Various obstacles are used from the simple bar to combinations of two hedges and a bar, two bars and a hedge, etc. The obstacle frequently goes above six feet in height and four or five in width. These hunters are usually the horses being trained by the riding masters.

The park saddle is used in this work. The entire ride is given in the riding hall. Once having seen these horsemen and horses, any fair minded American cavalry officer will admit that between French equitation, as demonstrated and taught at Saumur, and the equitation taught at West Point there can be no comparison. At Saumur he sees the careful development and evolution of a science, long since entrusted to scientific specialists; here he finds a system carefully thought out in the beginning, dating from the administration of the Count d'Aure (1736); since that time succeeding administrations have added their improvements successively.

Captain Saint Phalle of the cadre noir, and one of the most celebrated horsemen in France to-day, said to me: "This system that you see here to-day has not been inaugurated by this administration. It dates from the early part of the eighteenth century; we écuyers simply endeavor to add something to the fabric already carefully constructed, and based upon principles long since found to be correct." Captain Féline, likewise of the cadre noir, said to me: "The principles of equitation are to-day practically fixed. Any two or more men, having a proper knowledge of what they write when treating the subject, are bound to say more or less the same thing. Equitation is no longer in an experimental state."

There may be some argument as to the material advantage of the high-school and scientific equitation from the military standpoint. So I shall state here that the *écuyers* treat equitation in all its forms; their idea is that a cavalryman should be given the correct idea of what a horseman and a horse should be; a horseman from the various standpoints of horse-breaking, horse-training, steeple-chasing or cross-country, riding hall exercises, riding of difficult animals



SAUTEUR EN LIBERTÉ — REARING. RIDING MASTER.

and the high-school; a horse from the standpoints of charger, hunter and race horse, and from the standpoint of breeding.

Here I wish to say that only straight equitation is taught. By straight equitation I mean the work with the jumpers in the riding hall, hippodrome and cross-country; 2d. The training of a green horse, to the extent of having him understand the change of lead, to respond readily to hand and leg, and to jump freely; 3d. The riding of well trained thoroughbreds in the various simple movements of the riding hall; 4th. The sauteurs, horses trained to kick and buck; 5th. Some instruction in the training of horses for racing. Under this last heading I would say that there are about forty of the horses be-

longing to the school which are trained by selected members of the student classes for the spring races, which take place at or in the vicinity of Saumur. These horses are ridden in the races by the officers who train them.

However, the more finished side of equitation, such as the high-school, is presented to the student in order that he may see the higher education of the horse and the proper way in which to go about such work. This system shows the science of equitation in its highest development and in all its branches. For those student officers who desire to specialize, it demonstrates the higher steps, and by force of practical example, gives to the young graduate a most accurate idea of the lines along which he is to work, if he aspires to be considered as an "homme de cheval," or to be an écuyer.

And let every American cavalry officer disabuse himself of any idea that he may have that military equitation in France is not strenuous. Let him take a "draw in the dark" amongst the principal half-breds for the weekly cross-country run at Verrie, with snaffle bit and no stirrups, and ten to one upon his return he will say that it was sufficiently exciting. Or let him mount (as do many of the écuyers and student officers) in steeple-chases and obstacle races, horses he has never seen until he mounts them to go to the post, and over courses that he has never raced on before. It will be of sufficient pace to prove my assertion. Let him go to Pau and follow a drag across that country; let him mount the sauteurs in liberty, or those powerful unbroken half-breds; there are many ways in which he could convince himself of the truth of my assertion.

Finally, the cadre noir consists of a dozen of the best riders that the French cavalry can produce—men who have spent their lives in practical equitation of the most varied description, from the training of difficult, unbroken half-breds to the high-school for the selected thoroughbreds; alike at home in cross-country or in riding hall, on steeple chase or race course, on broken or unbroken horses, knowing the theory of treatment for all possible cases, and the proper manner of putting it into practice, I shall ever believe these gentlemen to be

the best all-round horsemen of the world. There may be better, but I shall have to see them before I change my opinion.

The French government has seen the wisdom of encouraging specializing, and it is due to a continuous line of specialists in equitation that the cavalry school of Saumur owes its unquestionable superiority in this science. Hardly a member of the cadre noir but is famous as a horseman through-



SAUTEUR EN LIBERTÉ. RIDING MASTER.

out the French army; such names as De Montjou, Féline, Saint Phalle, Madamet, De La Brosse, are famous beyond the limits of France, and as long as men of this calibre direct the department of equitation, the prestige of Saumur will not diminish.

There is but one way to produce such horsemen, and that is by the establishment of a system of equitation equally as well devised as that of Saumur and Saint Cyr. In view of the general efforts now making in many directions to improve our military service, our cavalry service may well turn its attention to a careful consideration of the French methods of instruction in equitation.

While at Saumur, and with the Fifteenth Chasseurs at

Chalons, I have been struck with the fact that colonels, majors, captains and quartermasters, all mounted officers of every age and grade, are out on horseback all the time, jumping the obstacles and generally enjoying the exercise. The lieutenant-colonel and major of the school roster used to accompany the cross-country rides, leading the van, and jumping everything in sight as gracefully as any of the younger men. The French say, that "no man is a horseman who does not mount his horse daily."

Now, the French are no more vigorous than we, nor do they like to ride better than we; hence, I attribute the fact that they ride far more than we do, to their system—better horses, light equipment for pleasure riding, and fields arranged for exercising horses on track or on obstacles. All these items make riding a pleasure, and the more one rides, the better horseman one becomes.

For some reason there is a strong prejudice against the park saddle in our cavalry service; that it is a prejudice based on absolute ignorance of this saddle, goes without saying. There seems to be a prevailing idea that it is impossible to associate serious horsemanship with a park saddle and patent-leather boots. I wish that the holders of this opinion might all have the opportunity to ride with these French cavalry officers; I am quite sure that they, like myself, would arrive at the conclusion that the park saddle is the saddle for all work, except military work; and that clothing cannot unmake the man, any more than a saddle can affect his horsemanship. Moreover, we are, I believe, the only army in which the officers of cavalry use their regulation saddles when not on duty. Therefore, if an officer of our cavalry is called on to ride, away from his regiment, he is forced to ride the park saddle among civilians as well as among other military communities. But a man has to be taught to ride the English or park saddle, just as he has to be taught to ride his regulation saddle, for the two seats are not at all alike.

I am fully convinced that we should adopt this saddle for ordinary riding—everything except military drills and exercises. My reasons are as follows:

- 1st. It is light and very natty in appearance.
- 2d. It is far more agreeable for pleasure riding.
- 3d. Any one who can ride an English saddle, can cer-

TAKING OBSTACLE FIVE FEET HIGH AND SIX FEET THICK.



tainly ride a regulation saddle; just as an oarsman who exercises in a shell, can be counted on to row in a barge.

4th. Our cavalry seem to be the only horsemen of the day who do not use this saddle.

5th. I am convinced that sitting the trot is antiquated, that it is a method which was never intended for the American cavalry horse, that it is wrong in theory and practice, and that it is alike hard on the rider and on the horse. By the law of action and reaction, what is bump for the rider is bump for the horse. It is entirely logical that rising to the trot is far easier for the horse.

My further reasons for preferring to rise to trot are based on a full year's experience, and are as follows:

- 1st. It is more agreeable riding.
- 2d. It is less fatiguing to man and horse.
- 3d. One is less liable to cause sore backs.

4th. By this method the hardest trotting horse may be ridden with more or less comfort.

5th. When other nations, who have every right to be considered as good horsemen as ourselves, have adopted this method, it is time that we at least give it a trial.

Why is it that so many of our cavalry officers rise to the trot to-day, in spite of regulations, and why do our older soldiers seek pacing and single footing horses? Here in France a cavalry officer rides his horse at a trot up to his retirement, for hours at a time, and with *pleasure*.

[NOTE.—Rising at the trot is not forbidden by our Drill Regulations; Paragraph 988 reads: "Many cavalry officers are now disposed to favor rising at the trot, as a relief from the close seat, and a desirable change to men and horses. With proper instruction, this practice may occasionally be found advantageous in long marches."—Editor.]

THE FOURTH CAVALRY WITH GENERAL LAWTON IN LUZON.

BY CAPTAIN GEORGE H. CAMERON, FOURTH CAVALRY.



GENERAL EDWARD M. HAYES, U. S. ARMY.

[*Continued.*]

THE NORTHERN EXPEDITION.

THE plan of operations for the fall of 1899 provided for a flanking movement under General Lawton, similar to that of April, but with the object this time of surrounding the insurgent army west of the Rio Grande, and capturing Aguinaldo and his headquarters at Tarlac. The advance

brigade of General Lawton's command, under Brigadier General S. B. M. Young, consisted of the Fourth Cavalry (except Troops E and K) the Twenty-fourth and Twenty-fifth Infantry, the Macabebe Scouts, under our Lieutenant Batson, Scott's Mountain Battery (a company of the Thirty-seventh Volunteer Infantry with the guns of the original "Astor Battery") and a detachment of engineers. Several changes in the makeup of the brigade occurred during the advance, as will be noted. The line of advance as planned was through the towns of Arayat, San Isidro, Cabanatuan and San José.

The regiment was ordered to San Fernando early in September. The movement was made by rail, the available rolling stock permitting but one troop to move daily. The box cars were so diminutive that we had difficulty in loading four horses per car, these four being fitted in, like shoes in a shoe box. Then, to guard against accidents, it was necessary to close the door. As there was no ventilation except through a tiny window at either end, our poor horses emerged from this sweat-box in the most woe-begone shape. The men, for whom no accommodation had been provided, cheerfully baked in the sun as they rode on top of the cars.

F, B, M and A made the trip on successive days, beginning September 5th. These four troops of the First Squadron had their American mounts. Next came I, with its pony mounts, then L, with a combination of ponies, fat band greys, and some Australian horses on probation, and on the 11th the headquarters. The men were quartered in abandoned public buildings and houses, while the horses were stabled in sugar camarines. On the 20th Captain Erwin brought up the Second Squadron (still dismounted), except G, which with the band was left in charge of the barracks at Pasay.

Nine troops were ready to start at command. Duty at San Fernando was the usual outpost, but work was incessant, as the recruits were still weak in mounted drill, and many horses were still unshod. Occasionally patrols were sent out beyond Mexico (garrisoned by the Twenty-fourth Infantry) to feel the country.

A platoon of Troop B, under Lieutenant Slavens, pushed as far as Santa Ana on October 3d, having a fight in

the streets of the town in which four insurgents were killed. On the same day Captain Cameron with Troop A drove the enemy out of a trench at Santo Niño, but lost Private Charles Radcliffe, who was shot in the head while riding at the point.

On September 15th Lieutenant Colonel Edward M. Hayes, who had succeeded Lieutenant Colonel Wagner, arrived from the States and hastened to San Fernando to assume active command of the regiment. The advent of a man of his rank and experience was most welcome, as it was felt that we should have a chance to be something more than the man-of-all-work. Veterans of the Civil War "hiking" in the Philippines were scarce, and Colonel Hayes soon became well known for his energetic campaigning. At San Fernando, also, joined Chaplain Oliver C. Miller, of California, attached to the regiment. He had come to the Islands with his State volunteers, was an active man, accompanying the column throughout the campaign, and exercised exceptional influence and control over the men.

The start of the expedition was delayed by the unusually heavy rains of this year. In every direction streams were overflowing their banks, and roads were mere bogs. On October 10th the order to move was published, and the 11th saw us on the road.

Lieutenant Munro had succeeded Lieutenant Dudley in command of L.

For transportation each troop had five carabao carts, carrying rations, ammunition, field forge, horseshoes, etc. Two days later each had three, a week later but one, and after two weeks we were reduced to our saddle pockets and were doing effective cavalry work.

During the whole campaign the saber was carried. Not once was it used as a weapon, but, strapped to the saddle, it lay in the mud, accumulating rust for the inspector, a useless burden to weary horses and a source of never ending profanity to weary men.

The efficient work of General Young's aides had improved the roads, mostly by bamboo corduroying, to such an extent that progress was excellent on the first day, and

the provisional brigade encamped at Santa Ana. Next morning the Twenty-fourth Infantry moved out to capture Arayat, which had been reoccupied by the insurgents after the close of the April campaign. The First Squadron was dismounted and marched nearly to the town as a support, but was never needed. Although strong resistance had been anticipated, a few of Scott's shells were sufficient to start the garrison on the run. By the 13th the roads had been repaired sufficiently to bring up the train.

Late in the afternoon Captain Erwin made a reconnaissance with C, D and H, along the road to the westward, by which the enemy had retreated the preceding day. He struck them in force, not over two miles from town, deployed the three troops, and, after a brisk engagement, chased them out of their intrenchments into the timber. First Sergeant Gustaf Will (D), Corporal Charles B. Hall (C), and Private Matthew Killian (D), were wounded.

Four days were spent at Arayat, waiting for the construction of a rope ferry across the swollen Rio Grande. This was the first of many delays encountered in the attempt to operate and supply troops in spite of rain and mud. In the construction of this rope ferry, and in the subsequent difficulties encountered in advancing his supply train, General Lawton was always on the spot, directing with the push and restless energy which earned for him in the '70's the name of "the best field quartermaster in the service." During the wait Captain Ballance's battalion of the Twenty-second Infantry and Batson's Macabebes joined the brigade.

On the evening of the 17th these two commands crossed on the ferry and took the advance up the left bank. Batson successfully executed a detour and tested his men in a hand-to-hand fight in a trench near Malibutad. The "little brown men" played havoc with their old enemies, and behaved in a manner that convinced Batson that they would meet any demand. The First Squadron moved across the river in the forenoon of the 18th, the first troop, A, establishing a line of couriers, and connecting at noon with Captain Ballance, who had captured the town of Cabiao without difficulty at 10 o'clock. The whole brigade and train reached

this town during the afternoon and night, after a terrible struggle with the boggy roads.

Next day the battalion of the Twenty-second again took the lead, closely followed by Colonel Hayes and the First Squadron. It was a most mortifying experience to progress slowly up the road as the way was cleared for us. The universal growl was vigorously voiced by Colonel Hayes, but with no success. The Colonel was anxious for a chance "to ride 'em down, sir!"

Some satisfaction could be taken in watching the business-like methods of the Twenty-second. This battalion pushed steadily up the road, the scouts, flankers and lines of skirmishers, when required, moving with a confidence and precision remarkable in such a country. A few men would search a thicket or an isolated house and then quickly resume their places, reminding one forcibly of the rapid work of a well-trained hunting dog. If the point marching on the road was fired upon, the men dropped prone, vigorously worked the magazine, and then quietly resumed the march. In the capture of large towns we invariably found the main resistance at a barrio, some three or four miles out. The Filipinos, in this way, prevented the possible destruction of women and children, who were in evidence in great numbers in the town itself. As a rule they sat in the windows under white flags and carefully counted our men marching in.

San Isidro was no exception. The barrio of Calaba had been intrenched and manned by the troops of Pio del Pilar. Captain Ballance made short work of it. Troops A and B were dismounted to form reserves for the wings of his battalion, but the advance into San Isidro, as far as they were concerned, was as uneventful as a holiday procession. Up the streets, far in advance, the same beautiful work could be seen, skirmishers peering around corners, climbing fences, now and then a few shots, but always the drill-like advance.

San Isidro was made a base of supplies. The incessant rains which hampered the movements of troops had proved of benefit in permitting the navigation of the Rio Grande as far as this town. Beyond this point, however, the river rose and fell with such startling rapidity that the trip of a boat

was a pure matter of luck, and accordingly steps were taken to equip the advance column with complete trains. A delay of over a week ensued, while General Lawton labored to accumulate rations and supplies in quantity to warrant a further advance.

During this time, in compliance with G. O. 153, A. G. O., the squadrons were reorganized alphabetically, and, in order to make two complete squadrons from the troops present, L was attached to the First and M to the Second Squadron. Captain Erwin, who had taken D and H back from Arayat to receive their horses at San Fernando, rejoined on the 23d and took command of A, B, D, and L. C Troop still dismounted was attached to division headquarters as train and station guard. I Troop, as usual, was General Lawton's escort. Captain Rivers commanded F, G, H and M. Troop G, under Captain Cress, was equipping at San Fernando and preparing to overtake the squadron. Lieutenant Slavens left the column on October 23d, to accept the position of aide on General MacArthur's staff, vacated by our Lieutenant Brown, who had been made a major and inspector of volunteers.

Lieutenant Dudley succeeded to the command of Troop B. This young officer made a most creditable scout on the 26th with one of his platoons, penetrating eight miles into the enemy's country and making an excellent report of the obstacles to be overcome. On the 27th we resumed the forward movement, with Captain Ballance still leading. The road to Cabanatuan runs parallel to the Rio Grande and crosses all of its tributaries. These streams, with steep banks and all bridges destroyed, proved almost a complete check to progress. Bamboo rafts were constructed, but they would carry, at most, one cart or about a dozen men, the horses and carabaos swimming the streams. At the Taboatin River the Twenty-second had a lively fight, with three casualties, in driving the enemy out of a trench on the opposite bank, but reached their destination, Santa Rosa, before nightfall. The First Squadron encamped for the night at the Taboatin River and spent the next day as engineers and freight handlers in the endeavor to insure the advance of

the supply trains. At this stage of the proceedings the whole division was strung out and struggling to pass rations up to the head of the column. We moved up to Santa Rosa on the 29th. Inasmuch as our horses had been living on the country for some time with satisfactory results, plans were here made to allow the cavalry to operate alone.

On October 30th Majors Augur and Morton were assigned to command the two squadrons. On the 31st two columns were started. Colonel Hayes, with Major Augur and the First Squadron, set out for Talavera by way of Cabanatuan, which was held by the Twenty-second. After successfully fording the broad Rio Grande at the latter town, we struck out into unknown country. All along the road, as we advanced, were abandoned carts and impedimenta, indicating a demoralized flight. The sight of these naturally induced a desire to push ahead, but the gait was inexorably hindered by the quagmires and marshes through which we were obliged to pass. Resistance was encountered in only one barrio. While the leading troop (A) dismounted and pushed the enemy aside, Colonel Hayes galloped the rest of the squadron into Talavera, capturing a storehouse filled with ammunition, shells, and brass howitzers, as well as a valuable library and seventy sacks of flour marked, "Portland, Oregon, U. S. A." The effect of this sudden appearance of the American trooper with his "caballo grande" was far-reaching. The garrison and the natives who scattered over the country spread wild tales of the man-eating horses as an explanation of their eagerness to get away.

The second column, under Lieutenant Colonel Parker, Forty fifth U. S. Volunteer Infantry (our Captain Parker), with Batson's Macabebes and Troops H and M under Captain Erwin, set out for Aliaga and occupied the town on the evening of October 31st. This command had the same difficulty with the impassable roads, one horse in M Troop miring so badly that he was ordered to be shot.

On entering the town Lieutenant Batson rode ahead alone and captured the telegraph operator, his instrument, and three important messages, as well as two ponies, two bull carts, and considerable property. The Macabebes,

scouring the country on the succeeding days, encountered the enemy on November 2d, near the barrio of Santiago in a well concealed position from which strong volleys were poured into Batson's command. Lieutenant Boutelle, Third Artillery, was killed when about to charge the position. Batson's inspiring example nerved the Macabebes in the rush that followed, and the insurgents were routed, leaving six dead in the trenches.

At the first news of the engagement, Colonel Parker took all the rest of the command (except ten men left in Aliaga with Captain Lockwood) and hurried to the scene. A running fight developed as soon as he left town, and skirmishing was practically continuous during the day. The two troops marched nearly twenty miles, crossing five streams by swimming, and succeeded in threshing out every barrio in the vicinity, with a result of twelve more dead insurgents, and only one casualty, Private Henry Rudenbeck slightly wounded. On the morning of the 3d, while the men were answering water call, they received a genuine surprise in the shape of three wild shells discharged from a piece of artillery in the neighboring woods. A detachment was hurried out and drove off the enemy, but, in spite of hard work, could not locate the gun. The command returned to the Rio Grande on the 5th, remaining in camp opposite Cabanatuan until the 8th, on account of the high water.

On November 2d a third column, consisting of Troop D, Third Cavalry, under Captain G. F. Chase, and Troop F, Fourth Cavalry, under Captain Rivers, made a raid on Bongabong, eighteen miles eastward, captured the town without difficulty, killed three insurgents, secured twelve ponies and six rifles, destroyed a large quantity of powder, uniforms, and signal property, and returned to Cabanatuan the following day without casualty.

Colonel Hayes's command at Talavera could obtain no supplies, and found itself still anchored to Manila for rations, or rather half rations. The whole advance column had been reduced to half rations on October 25th. Three days were consumed by our bull carts in making the trip to Cabanatuan and return. This time was spent in scouting the country,

with the result that large quantities of ammunition, shells, reloading tools, valuable books and papers, were discovered hidden away in remote places. At San Domingo, Lieutenant Davis and Chaplain Miller came upon a hospital containing fifteen wounded Filipinos, abandoned in a starving and filthy condition. Some of these men had been wounded near Manila in the early stages of the war and some quite recently. In every case a bone was fractured. Here was tangible evidence of the statement that many wounded are carried away in every engagement. Colonel Hayes promptly sent the surgeon with medical supplies, and the Chaplain impressed natives to nurse these unfortunates. The hospital was policed and disinfected, and all wounds dressed and bandaged.

In the light of subsequent events, it is clear that Aguinaldo contemplated retiring from Tarlac to Bayambang, Nueva Vizcaya, by way of San José and Caranglan. When, therefore, the former commander of Talavera reported the loss of his town and the probable advance of American troops to San José, Aguinaldo flew into a rage and ordered him to recapture Talavera, assigning him 200 picked troops for the purpose.

Colonel Hayes's command was rudely awakened at 4 A. M., on November 7th, by a tremendous fusilade poured into Talavera from three directions. With the exception of two volleys from a "rattled" outpost, no reply was made to the storm of bullets. The men turned out and fell in with amazing speed and lack of confusion. In less than three minutes the whole command had assumed the positions previously designated by the squadron commander.

Then followed an hour of antics peculiarly Philippinesque. Their bugler, a splendid performer, playing on a Spanish keyed-instrument, executed an inspiring air, followed by the celebrated "Bolo charge," and then came the loud commands of the officers. From a distance of about 700 yards the insurgents rushed forward with cheers to a range of about 500 yards, halted, and sent in two or three high volleys, retreated to the original position, and repeated the whole program.

One could not help fancying himself a silhouette target for these "skirmish runs."

Our fire-discipline was excellent under the temptation offered, for, emboldened by our silence, the insurgents were within two hundred yards at daybreak. Colonel Hayes then gave the word, and the contents of the magazines from B and D Troops produced a wild stampede that our men could not follow. One wounded and two dead insurgents were picked up in the high grass, but the many trails from the town were covered with blood. Our loss was one pony killed. Fifteen minutes after our magazine fire, the men were busy cutting rice grass with their mess knives and singing the familiar "'Way Down Yonder in the Rice Field."

Lieutenant Harris rejoined in the forenoon, with a detachment of convalescents from Manila, and in the afternoon General Young and his staff arrived, bringing orders for a move on San José the following day. The eighteen-mile march was uneventful. General Young, with the Macabebes, taking a more direct route, reached San José an hour ahead of us, met with no resistance, and captured more stores and machinery of the abandoned Cabanatuan arsenal.

At this town we received sad news. Troop G, which, as previously stated, had been left in our barracks at Pasay, received hurry orders to join General Schwan's brigade, organized to clear up Cavite Province, where the insurgents, under Trias, had become decidedly aggressive. Captain McGrath, with Lieutenant Purviance and fifty-two men, dismounted, left Pasay at 11 o'clock P. M., October 5th, reaching Zapote bridge after three hours' march. Next morning the troop joined the brigade at Binacayan, where eleven companies of the Thirteenth Infantry, three of the Fourteenth, Reilly's battery Fifth Artillery, Tate's mounted troop of the Third Cavalry, and Castner's company of Tagalog scouts, were assembled. In the movement on Cavite Viejo on the morning of October 8th, G Troop and the Tagalogs had the advance position. The town was deserted, but a reconnaissance disclosed numbers of insurgents holding the road on to Novaleta.

Captain McGrath was now placed in command of the ad-

vance, with two companies of the Fourteenth Infantry under his orders, to be used as reserve. Scouts having ascertained that the strong insurgent position on the Rio Mindlat could not be turned, a frontal attack was begun at about 11 o'clock A. M. G Troop advancing, deployed on the right of the main road, and Castner's company on the left, each with an infantry company in support. The enemy started continuous fire from the time the line arrived within a thousand yards, but as usual shot high. Advancing by rushes from dike to dike, and firing excellent volleys, our men pushed on, seemingly without casualties, to about 300 yards from the trenches.

Suddenly the insurgents discharged a cannon, which was cleverly concealed under a nipa shack, and Captain McGrath fell with a jagged wound in the thigh.

The advance was not checked, although the supports suffered heavily from bullets passing over the skirmish line, and the line itself was under a tremendous fire. Corporal John P. Martin and Private William J. McIntyre, both of G, were wounded before the trenches were finally carried. The troop captured the cannon that had laid their captain low, which proved to be an old muzzle-loading brass, two and one-half inch piece, about thirty inches long, and had evidently been loaded with scraps of metal. Little resistance was met in the remainder of the march into Novaleta. The following morning Rosario was entered before 9 o'clock, and communication was established with a launch from Manila, bringing rations and needed supplies. The cargo was unloaded with alacrity, and all the wounded of the column were hurried back to Manila by water.

In the afternoon the brigade in two columns set out for San Francisco de Malabon, spending the night in bivouac on the road. The advance on the morning of the 10th was resumed with caution, as rumors of Filipino concentration had been received. As a matter of fact, however, Trias had disbanded his force, and satisfied himself by annoying the column with small patrolling detachments. After entering the town without difficulty, a battalion of the Thirteenth Infantry pushed on towards Buena Vista, and ran into a position from which they suffered considerable loss. On their return

they came upon a Filipino field hospital, flying the Red Cross flag and containing five dead and twenty-four wounded insurgents.

On the 12th, with G Troop and Castner's scouts again leading, a march was made straight across rice fields for four miles to the Imus road, and thence to Dasmarinas, where orders were received to return to Manila, since little headway could be made against the scattered guerilla bands. The brigade was accordingly marched back to Bacoor on the 13th, and was there disbanded, the troop continuing the march back to our barracks that evening.

Captain McGrath, under the best of care in the hospital at Manila, lingered until November 7th, but the climate and his run-down condition from hard field service were against his recovery from a wound that would have been serious in any case. In McGrath the regiment lost a genial comrade, a talented, brainy officer, and as brave a man as ever wore a uniform. Generals Schwan, Lawton, Otis and Miles successively concurred in recommending a brevet for his exceptional gallantry in the action in which he was wounded.

A telegram from Manila, forwarded to General Young, read: "Your most important objective, Caranglan, etc." No time was lost in complying with these instructions. With three days' half rations in the saddle-bags, Colonel Hayes set out early on November 9th for Caranglan, a town where the two main roads to Bayambang unite. During the forenoon the swift Rio Grande was forded no less than eleven times. At Puncan the scouts captured a small detachment with five Remingtons, and shot a boloman who attacked instead of surrendering. The trail to Caranglan showed the footprints of a native running to give the alarm, and we found that the town had been abandoned only an hour before our arrival. One Domingo Colminar, a secretary of Aguinaldo, was found in the best house in town. He had been engaged in making preparations for his chief's retreat, and had chosen to remain with his wife, who was in a delicate condition.

On the 11th an outpost reported the approach of a large body of natives. Colonel Hayes immediately rode out to investigate. They proved to be 167 bolomen from Nueva Viz-

caya, sent to act as Aguinaldo's escort. To our surprise, they evidently did not know Americans when they saw them, but straggled in, salaaming most profoundly to the Colonel. Once concentrated in the plaza, they were quickly surrounded and disarmed in spite of the frantic exhortations of Colminar from his window. Their bolos (each carried one large and one small knife) were distributed to the men for use in cutting grass.

Meantime, the ration question was serious. On the 10th and the 12th an officer with twenty men returned to San José and brought up two days' half rations packed on the military saddles. Colonel Hayes having been summoned back to San José on the 13th, took B Troop and all the prisoners, thus reducing the supply problem to some extent; but on the 14th heavy rains set in, lasting five days and swelling the mountain streams so that fording was impossible. During this period the command lived on carabao meat. Famished men experimented with bamboo cabbage and other unwholesome greens, and ran up a tremendous sick report. On the 18th, Lieutenant Holbrook, the efficient quartermaster and commissary, managed to work his way up from our train at San José after a two days' test of pluck and endurance, and on the 20th Major Augur received word to abandon the town.

When the start for the return was made, fully half of the eighty sick men were clinging to the pommel with both hands. Two fell off within a mile, and many were swaying. Just in the nick of time the Vizcayans, liberated by Colonel Hayes, appeared on the scene bound for home. With a promise of rice and pesos they were persuaded to act as bearers, and we resumed the march. Before we reached Puncan, eight soldiers were in litters and a dozen or more had to be coaxed back into the saddle every half mile. The second day's march was even more trying. At San José each troop established two or three sick wards, the well men were detailed as nurses, and every effort was centered on restoring the strength of the command. Farrier Michael Sullivan and Private William H. Erwin (A), and Private Peter Griewatz (D) were buried at San José, but more than twenty men

who had taken part in the Caranglan trip were subsequently sent back to the States and discharged for disability.

It was disappointing to learn that Aguinaldo had struck further north, and that General Young had pushed on his trail with the Macabebes and such troops of the Third Cavalry as could overtake him. General Lawton himself had abandoned the work of superintending the supplies, and had hurried forward to Huminangan and Tayug, where our Troops G and F were holding the towns and furnishing couriers and escorts.

On November 22d, First Lieutenant H. A. Sievert, promoted to the regiment, joined from Manila and was appointed squadron adjutant of the First Squadron. On the same day Second Lieutenant J. N. Munro, with a detachment of fifty men selected from the four troops of the First Squadron, and three native guides, set out for Bayambong. His route via Caranglan, Salazar, Dupax, and Bamban, was a difficult mountain trail that taxed the strength of the ill-fed horses. From Dupax, which he reached without resistance at noon of the 25th, he sent out scouting parties to ascertain if the rumored strength of insurgents was correct. No signs of the enemy could be discovered, but about noon of the next day a flag of truce appeared, ushering in an American prisoner and the Presidente of Bamban. From them Lieutenant Munro learned that his party of fifty men was supposed to be the advance-guard of a large force, and that preparations for surrender were well under way. He accordingly sent a courier back for reinforcements, and Colonel Hayes dispatched Captain Erwin up the trail with H Troop and details bringing his strength up to an even hundred. More prisoners came in to Munro next morning, among them an American who turned out to be a secret service man of General MacArthur's. This man had a full knowledge of the situation, spoke Spanish and the native dialects, and proved of great benefit. Munro sent him back with a guard to Bamban, whence he telegraphed to General Canon in command of the district, and soon secured his consent to a surrender on the next day. On the next morning, however, Lieutenant Castner with his native scouts pushed into Bam-

ban from the west, and, learning of Canon's willingness to surrender, set out for Bayambong with characteristic energy and promptness. Munro reached Bamban an hour later, discovered what had happened, and started a stern chase.

Castner was soon overtaken, and the two young officers after a lengthened parley decided that it was a case of "first come." Munro had a horse, Castner a pony; result: Munro received the surrender of General Canon, fourteen officers and about a hundred men with sixty rifles, and liberated 128 Spanish and seven American prisoners. In his report of this expedition General Lawton wired as follows:

"Chief of Staff Manila :

"Lieutenant Munro is deserving of highest commendation.

"LAWTON."

The town and the surrendered arms were turned over next day to Captain Batchelor, Twenty-fourth Infantry, who, with a battalion, followed Castner's trail. On November 30th Munro started on his return to San José, accompanied by the American and most of the Spanish prisoners. At Bamban he met Captain Erwin's advance party and received most needed rations. The return trip was most exhausting on the horses, many of them having lost shoes on the rocky trails.

Meantime word had been received at San José, that General Young was in hot pursuit of Aguinaldo and that General Lawton had been recalled to Manila to assume charge of a campaign in the south of the island. He sent word to Colonel Hayes that he would take six troops of the regiment south with him. Our supplies finally having overtaken us, the succeeding days were one long stretch of horseshoeing. On December 4th, F and G came down from Humingan and Tayug, and C and I arrived with General Lawton. On the 6th Headquarters and A, B, D, F, G and H, marched to Talavera, leaving L stationed at San José and M at Tayug. On the 7th the command reached Cabanatuan. Next day, under General Lawton's orders, the two squadrons were trimmed down to sound men and horses, with a result that 128 men and eighty-eight horses were left to accompany the supply trains.

Our destination was San Miguel by a detour through Penaranda, intended to cut off the insurgent forces of Pio del Pilar. The command back-tracked to the Tambo River and then struck across to Penaranda, where a halt was made until 5 P. M. The march was then resumed on a mountain trail, and was kept up until almost midnight, plunging into deep streams and struggling through dense brush in inky blackness. It developed afterwards that the attack on San Miguel planned for the 10th, was postponed a day; but Colonel Hayes knew nothing of this, and, having received instruction to be behind the town at a fixed time, plodded along through the night until his guide assured him that he was on the spot. Shortly after leaving camp on the 10th, the scouts ran into a body of about 200 insurgents. The Second Squadron in advance deployed across open fields, and advanced upon the enemy's position. G and H were met by a brisk fire, Corporal Winthrop Richardson (H) having his thigh bone shattered by a Remington bullet and Corporal Lorenzo de Clairmont (B) receiving a severe wound in the arm and breast. The latter was interpreter and stood directly behind Colonel Hayes.

Our volleys soon routed the insurgents, who, from their own statements, lost four killed and six wounded. The town of Sibil was reached at 3 P. M. On the outskirts the scouts found an abandoned cart with nine Mausers and some of Pilar's records and personal effects. At 8 P. M. Major W. D. Beach, Inspector on General Lawton's staff, sent up a powerful signal rocket, which we learned afterwards was seen and reported at San Isidro. Irregular skirmishing took place as we closed in on San Miguel next day. The First Squadron was sent forward to reconnoiter the city, but, learning that it was occupied, a detail under Lieutenant Dudley carried in dispatches and a request for an ambulance, while the rest returned to about the best camp we had while on campaign. Corporal Richardson's exposure brought on gangrene, and he died in the San Miguel hospital on the 13th.

Next day, December 12th, Colonel Hayes proceeded southward to carry out his instructions to destroy a reported camp of the insurgent general, Pilo del Pilar. Lieutenant

Arnold, with the regimental scouts, met with slight resistance in the advance, and just before noon reached the famous Biac-na-Bato, a natural, rocky stronghold. The garrison had fled, except a few men who were easily driven out. Leaving their horses, the detachment pushed well up the mountain trail, finding no enemy, but destroying a storehouse containing uniforms, tools and supplies. Major Morton organized a party of volunteers to explore the mountains and trails next morning. The party split up, and one small detachment, under Lieutenant Sievert, destroyed a dozen large shacks with timber floors, which probably were constructed for Pilar's camp. During the day Colonel Hayes received a message from General Lawton to return to San Miguel. After camping at the same place as on the night of the 11th, we reached the town on the morning of the 13th and received the news that the campaign was over, together with a congratulatory letter to the Colonel, enclosing a copy of General Lawton's report to Manila:

“SAN MIGUEL, December 13th.

“*Chief of Staff, Manila:*

“I have wired you to day report from Colonel Hayes, commanding Fourth Cavalry, just received, announcing the capture and occupation of the famous insurgent stronghold, Biac-na-Bato. From information furnished by residents of this city, it is learned that Biac-na-Bato, or “Split Rock,” as the name indicates, is a gigantic cleft in the range forming a natural fortification, located South of Mount Madlom, Mount Mabio being higher and to the rear or east. There are no inhabitants except garrison; country rocky, no crops, plenty wood and water; was successfully held on January 8, 1897, by sixteen insurgents against nine hundred Spaniards. Again I feel it my duty to invite the attention of the general commanding to the gallant and effective work of this command. I heartily concur with Colonel Hayes in his commendation of Lieutenant Arnold; and I also wish again especially to commend Colonel Hayes as worthy of special and substantial consideration for faithful and gallant service in the presence of the enemy under unusually trying and difficult conditions. I have directed Biac-na-Bato to be held for the time being, until the surrounding country can be examined.

“LAWTON,
“*Major General.*”

At San Miguel the command was broken up. Colonel Hayes with Major Augur and Troops A, B and D, marched on the 17th to Baliuag, en route to Manila. Major Morton, with F, G and H, remained to garrison the towns of San Miguel, Norzagaray and San Rafael. At Baliuag the First Squadron was entertained by the hospitable Third Infantry, who set out the first fresh beef and bread we had seen for three months. Their bakers must have had "night shift" after we left. December 18th saw the squadron back in quarters at Pasay. The news that we were to move out January 3d with General Schwan's southern expedition, tended to make everybody get the full measure of enjoyment out of the short respite from field work, and troop commanders spent all the savings derived from the three months of half rations, on holiday dinners that are still talked about.

During the period in which the headquarters and the majority of the troops were under General Lawton in the north, Troops E and K were performing equally arduous work with General MacArthur along the railroad. In the advance on Tarlac, and subsequently on Dagupan, these two troops, together with a detachment of scouts under our Lieutenant Slavens, were always out in front and had frequent skirmishes with the enemy. At Porac, November 2d, Lieutenant Hawkins, commanding Troop E, led a mounted charge and earned praise for the work of his men, as well as mention for his own coolness and courage. At Magalang, November 5th, K Troop had two men severely wounded, Privates William Brett and John L. Jackson. In this spirited engagement, which lasted over three hours, the insurgents left eighteen dead on the field. At Bamban, November 9th, Lieutenant Hawkins and ten men of E Troop formed part of a party of nineteen, who, under General Bell, succeeded in arriving in rear of a trench containing one hundred insurgents. The party charged, and, without a single casualty, killed and wounded twenty-nine insurgents, and captured six. General MacArthur, in reporting the action, characterizes it as "a performance, so far as I know, as yet without parallel in this campaign, as illustrating a combination of skill, determination and audacity." At Capas, November 11th,

Private Thomas Stacker (K) was instantly killed, and on the same date, at Concepcion, E Troop had two horses killed. The two troops after continuous scouting, skirmishing and hard marches, settled down at Bayambang in December to patrol and scouting work from garrison.

About 2 o'clock on the morning of December 20th, Major Beach arrived at our barracks at Pasay with the appalling news of General Lawton's death. With his personal escort, Troop I, two squadrons of the Eleventh Volunteer Cavalry, one battalion each of the Twenty-seventh and Twenty-ninth Volunteer Infantry, and two guns of Taylor's battery, the General had marched all of the rainy night of December 18th, to the attack of the town of San Mateo. The swollen river caused considerable delay in crossing the troops next morning, under the fire of concealed insurgent sharpshooters. As usual, the General moved to the very front to direct movements. In his yellow rain-coat, he made a most conspicuous target, and his staff, impressed with the danger, urged him to seek cover. A few moments later he fell, shot through the heart. His body was removed, under guard, to the Pumping Station, and from that point to his home in Manila was escorted by the First Squadron of the regiment in which he had served eighteen honorable years. The Secretary of War, in publishing his death to the army, pays this tribute:

“He fell in the fullness of his powers, in the joy of conflict, in the consciousness of assured victory. He leaves to his comrades and his country the memory and the example of dauntless courage, of unsparing devotion to duty, of manly character, and of high qualities of command which inspired his troops with his own indomitable spirit.”

Henry Ware Lawton is one more name added to the list from which the Fourth Cavalry draws its regimental motto:

“Decessorum Virtutem Aemulemur.”

FROM TEXAS TO DAKOTA.

THE EIGHTH CAVALRY'S LONG MARCH.

BY CAPTAIN F. E. PHELPS, (EIGHTH CAVALRY), RETIRED.

IN the spring of 1888 the Eighth Cavalry was stationed in Texas, and the different troops were scattered from Fort Brown, near the mouth of the Rio Grande, to Fort Hancock near El Paso, the regimental headquarters and five troops being at Fort Davis. The regiment had come down from New Mexico in the fall of 1876 and the spring of 1877, and had been more or less actively engaged in scouting, patrolling the Rio Grande, and other similar duties, for eleven years.

The regiment had never been assembled. Officers who had served for years in the regiment had never met; some had never seen the Colonel, although he had been in command several years. When the troops concentrated at Fort Concho, the writer met for the first time the then accomplished regimental adjutant, although the latter had been in the regiment for six years, and renewed acquaintance with others whom he had not seen for eleven years. The result of this scattering process was not beneficial to the discipline and morale of either officers or men. Serving at widely different posts, under different post commanders, who sometimes had widely divergent views as to discipline, drill, equipment, care of men and of horses, officers naturally differed on many points, and this made more or less friction, which must have caused the regimental commander some worry and made his task a much harder one.

Neither did we expect the order to move. For eight or more years it had been periodically rumored that we were going to Dakota this year; we were going next year; we got to looking for this rumor like the vernal equinoxes; we were



EIGHTH CAVALRY OFFICERS ON THE MARCH FROM TEXAS TO DAKOTA. MAY TO OCTOBER, 1888.

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going by rail, leaving the horses behind to exchange with the Seventh Cavalry then in Dakota; some brashly announced we should march, and were jeered at by the wise-acres.

The captain of F, then at Fort Davis, desired to put in a troop garden, but naturally wanted to know if he should stay there long enough to gather his crop; and accordingly wrote a personal letter to a former captain of the regiment, then a major in the Inspector General's office at Washington, to see if there was any likelihood of a move; in reply the Inspector informed him that he had gone to the Adjutant General's office, and had been authorized to say that the regiment would not be ordered to Dakota or anywhere else that year, and that he could go ahead with safety; and yet, in less than ninety days the order came out like a thunder clap from a clear sky, directing the move to begin about the middle of May by marching; all heavy baggage and the authorized allowance for officers to go by rail.

A change in the station of the regiment to so great a distance fell with severity, from a financial point of view, on the married officers and soldiers. At that time the authorized allowance of baggage for officers was much smaller than now, and for a lieutenant would about cover one bedroom set, a few boxes or chests of bed clothing and wearing apparel, a barrel of crockery and a few folding chairs.

At Fort Davis the only lumber for crating to be had was "pitch pine," which is about as heavy as lead, and, as the weight of the crates was counted in, the amount of furniture that could be transported was small. The railroad put a prohibitive rate on anything shipped outside of the government bill of lading, and hence many officers had to abandon some of their household goods.

One officer found the freight on his wife's sewing machine, crated, would be about as much as a new machine would cost, and, owing to the fact that the post was to be abandoned, there was absolutely no sale for it, so he smashed it with an mallet rather than to leave it for some Mexican. Another sold going rich that cost him \$25.00 for \$2.00, while a field officer to look oned a fine black-walnut bedroom set. One young

officer, who had a very handsome and valuable lot of silver-ware, mostly wedding presents, forgot to enter his silver chest on his bill of lading, and when he arrived at Fort Sill he found a letter from the railroad agent at Marfa, saying that said box was not on any bill of lading, but, as it bore his initials, he had put it in with the troop baggage, and hoped it would go through safely; but that, of course, the railroad could not be held responsible if it was lost. The amount of worry the young man went through before he arrived at his new post in Dakota and found the chest safe, he will never forget, and when he reads this, he will doubtless remember the comforting suggestions made to him by his troop commander, how he could explain to his better-half in case the silver was lost.

Trusting to the positive assurances that the regiment would not move, officers brought their families out to Texas and had to hustle them back again at heavy expense, and board them in the East until "papa got to his station." This caused unholy glee upon the part of the unmarried, but caused a severe financial strain on the lieutenant's pay, much of which would have been spared if, as now, several months' notice had been given before a change of any great distance was made.

The colonel, E. S. Otis, was an invalid and did not march with the regiment; and the Headquarters, Band and Troops A, C, D, F, H, together with L which had come down from Fort Hancock, all under command of Major John A. Wilcox, moved out on the 15th of May, en route to Fort Concho, which post had been designated as the point of concentration.

The lack of experience in marching even five troops together was impressed upon us, when we entered the cañon only six miles from Fort Davis. The road leads down a rough, rocky hill, much of it cut on the hill-side, here thickly covered with loose rocks and cactus. The wagon train, two wagons to each troop, and two to headquarters, carrying rations and grain, had been sent ahead, and was overtaken by the column just as it started down the hill. Instead of either halting the train or the column, the troops were pushed past

on the hillside, causing much confusion, casting many shoes, and unnecessarily tiring both men and horses.

There was no order for camping, each troop squatted down where the captain chose, so long as it did not pass the troop in advance of it, stretched its picket line, put one sentry over it, and everybody went to sleep, except the sentry. The camp was made in the narrow part of the cañon, thickly underbrushed, and the troops were all huddled together; and there was little or no grass, while by going ahead a couple of miles, there was a broad, level flat, and plenty of wood, water and grass. No pickets or outside sentries were posted, and it may be remarked now, that during the entire march from Texas to Dakota, there never was any guard except the sentry over the picket lines. Owing to the quietness of the Indians that spring, perhaps guards were unnecessary; but certainly a fine opportunity for the instruction of guard, pickets, and patrols was lost.

Before leaving Fort Davis, Troop F devised a plan by which they could be sure of having rations and cooking utensils promptly in camp, without relying on the quartermaster's train. Each enlisted man contributed one dollar, each officer five dollars, and with this a light, strong spring wagon and harness were bought. Two spare troop horses were used, driven by an old soldier who was waiting his transfer to the Soldiers' Home, and was good for nothing else owing to age, whiskey and rheumatism; and in this wagon was carried the troop mess-chest containing two days' rations, the cooking utensils, and a small mess-chest for the officers.

This wagon followed closely after the troop, and being light and lightly loaded, had no trouble in arriving in camp as soon as the troop, thereby giving them their supper at once. Often the troop had their meal and were asleep hours before the heavily loaded six-mule wagons came up. On several occasions some of the troop wagons did not get into camp at all until next morning. On arrival at the permanent station, Fort Yates, the wagon was disposed of, and the proceeds presented to the troop fund.

The march to Fort Concho was exceedingly hot, dusty and uncomfortable. The marches were long, owing to lack

of water; there was little grass, the men and horses were not hardened to the work; no attention was paid by the commanding officer to the gait of the leading troop, or to the protection of the water holes on arriving in camp; mules and horses waded, and dogs wallowed in the water, before the supply for cooking had been secured, and there was a general "go as you please style" about the march that was hardly excusable. Another thing that caused great discomfort was the fact that the commanding officer rode a horse that had a very fast walk, and, no doubt without his knowledge, kept the troops sometimes for miles on a jog-trot to keep up.

No disposition of disabled horses was ordered, and instead of being shot they were abandoned, many of them being picked up by Mexicans, turned into the nearest military post, and the reward of twenty-five dollars per head was paid for broken-down animals that would not, and actually did not, bring that much at auction, when condemned. Many of the horses were old and unfit for service when the regiment started, and should have been disposed of at once. Troop F abandoned three the second day out, all of which were taken to Fort Davis by a Mexican; and the reward was collected.

Finally the entire regiment was, for the first time in its history, together and at Fort Concho, and the final orders for the long march were given out. Lieutenant-Colonel J. K. Mizner assumed command, and his orders were short and sensible.

No copy of the order issued is at hand, but substantially it was as follows:

The regiment was divided into three battalions of four troops each, to be commanded respectively by Major J. A. Wilcox, Major R. F. Bernard and Captain Louis T. Morris.

To headquarters was assigned two six-mule wagons, one to the band and two to each troop. The wagons were to carry ten days' grain and ten days' rations, besides the tentage, etc. One tent was to be carried for each field-officer, one for each captain, and one for each two lieutenants, with one common tent to each mess for a cook tent. One Sibley

tent for each eighteen men was provided. All officers' baggage was limited to one small trunk and a roll of bedding. No cots or mattresses were allowed. This last was not enforced, the commanding officer himself setting the example by taking a cot; and most of the officers, if not all, did the same.

Each enlisted man was to carry his carbine and sling, prairie belt and twenty rounds of ball cartridges on his person, and lariat, picket-pin, tin cup, canteen and nosebag on his saddle. In his saddle-bags he carried one change of underclothing. His blanket roll was carried in the wagon. Each troop also carried one thousand ball cartridges in the troop wagon, but as this was generally, if not always, placed in the bottom of the wagon, covered with tents and rations, or forage, it could not have been gotten at easily had necessity required it. All men's sabers and pistols were packed and shipped by rail. Officers carried sabers strapped to the saddle, and each first sergeant carried his pistol. The men were to wear blue shirts and trousers, blouses, boots and campaign hats; officers the same. Troop commanders were allowed, if they saw fit, to provide their men with raincoats or slickers. Several troops purchased what was known as the "Fish brand" slicker, which is of a yellow color, light and durable, and which covered the wearer and his saddle down to below his boot tops, and proved to be an almost perfect protection in the heavy rains that fell during the march, sometimes lasting all day.

The order directed that reveille should habitually be sounded at 5 o'clock, boots-and-saddles at 6, and the march begin at 6:10; and this was almost invariably closely adhered to.

The habitual order of march was as follows: First, the commanding officer and staff, followed by the band mounted. Next came the battalions, which alternated daily, and in each battalion the troops alternated daily, so that in turn each troop led its battalion and the regiment. The distance between battalions was habitually three hundred yards, and between troops one hundred yards, and this was fairly well kept, though some troop commanders were careless about

keeping the distance, thereby getting the benefit of the dust from the preceding troop; and this dust, especially in the narrow lanes of Kansas, which were sometimes lined on both sides by tall osage orange hedges, was very disagreeable. Straggling was strictly prohibited, and the entire march was singularly free from this vice. The shipping by rail of sabers and pistols was particularly welcome, and experience showed that the articles carried were all necessary. Side-lining was to be rigidly enforced, and, as a consequence, not a stampede of horses occurred.

The officer of the day was detailed from the captains, the officer of the herd from the first lieutenants, and the officer of the guard from the second lieutenants. The officer of the herd saw that the horses of each troop were taken to the best grass, within easy distance; that the horses were properly side-lined and guards vigilant. Not only was there no stampede, but it is believed not a horse was lost on the entire march by theft or straying, which, in view of the numerous desertions en route, shows that guard and herd duties were well performed.

Lieutenant J. C. Byron was sent ahead as engineer officer to select camps and procure wood, hay, and, when necessary, to buy water and rent camp sites.

As a rule the farmers along the road seemed to look upon the arrival of the regiment as a fine chance to make money, and it was nothing unusual for the quartermaster to have to pay ten to fifteen dollars for the privilege of watering the stock, if the water happened to be on private property, or, if as sometimes occurred, the men had to get drinking and cooking water from wells. As a rule, camping sites had to be hired for the night, and outrageous prices were sometimes demanded, and the amount to be paid had to be fixed by a board of officers.

Fresh beef was, when possible, purchased daily, and this was so successfully done that no complaint could be fairly made of a lack of good meat on the entire march.

From Fort Davis to Fort Concho the band was mounted on horses borrowed from the troops at Fort Davis, and naturally enough, perhaps, the troop commanders did not loan

the best or easiest-gaited horses, and for several days the band afforded much amusement to everyone; but they soon became hardened to the saddle, and before Fort Concho was reached, they got along as well as the average trooper. At Fort Concho, they received new horses, and as they led the regiment through the town of San Angela playing, of course, "The Girl I Left Behind Me," they looked well; and from that time the laughing at the band ceased. Guard-mount was always held in the evening, the band attending, and in good weather they gave a concert at night. They certainly worked hard, and probably never knew how much their music was appreciated.

The staff consisted of the adjutant, First Lieutenant Chas. M. O'Connor, whose efficiency, good nature and hard, common sense smoothed over many difficulties, and won the esteem of every officer and man. The quartermaster was that combination of sizzling energy, indomitable pluck, red-hot hair and temper, that made First Lieutenant Q. O'M. Gillmore, the very man for the place. No officer nor man worked so hard, none could have been so successful, and none received less credit—at least at the time.

At times, especially between old Fort Kearney and Fort Sidney, the roads were frightful, and it is a wonder the train got into camp as often as it did.

The Medical Department was represented by Captain and Assistant Surgeon Guy S. Edie. Not a death occurred on the march, and the health of the command was good, due largely to his care and precaution.

On June 2d the regiment moved out from Fort Concho, and took the Long Trail for the Dakotas. It is not within the scope of this article to describe the daily marches. July 16th the column reached Fort Riley, Kansas, where we met the Seventh Cavalry and enjoyed their royal—no, their American Army hospitality for three or four days. We exchanged transportation with the Seventh. Ours consisted entirely of government six-mule teams, except one ambulance, and was in good shape. The transportation we received from the Seventh was partly of the same kind, but mostly consisted of hired civilian four-horse teams and

wagons, and these were in a miserable condition. Time and again they broke down, or failed to get into camp before dark, despite the herculean and profane efforts of the quartermaster and his wagonmaster, and at least once, at Willow Island, we had to delay three days to rest them up. The annoyance and discomfort they caused, was the worst feature of the march from Fort Riley to Fort Meade.

As on the arrival at Fort Riley, the march was practically half finished, it should have been easy to see the weaknesses that existed and the faults that could have been corrected—and were not. One thing was conspicuous—the splendid conduct of the men. It was to be expected that on a long march, extending now over nine hundred miles, partly through a country thickly dotted with towns and villages, some disorders would occur, and more or less drinking and straggling be seen; but in this respect it was matter of congratulation that the conduct of the enlisted men was beyond praise. Kansas was supposed to be a prohibition State, but it was notorious that beer and whiskey could be had in every one of these towns; and while a few cases of drunkenness did occur, there was not a single complaint of rioting, disorder, or assault.

That this good discipline was almost entirely due to the careful personal supervision of the troop officers and noncommissioned officers is undeniable. If the battalion commanders took any special interest in the matter, it was not noticeable. In fact, the battalion commanders were simply figureheads, and we could have dispensed with them without detriment. It is not intended as a reflection on them personally—two have gone to the other shore—but it is believed it was due to the fact that they had no special authority or special orders. Except at the muster of June 30th and of August 31st there was not an inspection of men, horses or equipment made by the regimental or battalion commanders, and the writer, who commanded his troop from the second day out from Fort Riley to Fort Meade, cannot recall an instance when the battalion commander gave him an order, or evinced the slightest interest in his troop. The regimental commander should have noted and corrected this.

The regimental commander also had a habit of giving the trot for the last mile or two of the day's march, which was very hard on men and horses, and did no possible good, but harm, especially at the end of a long and tiresome day's journey. During the day, alternate walking and trotting would have been desirable, but was not given.

There was no great hurry and there was no reason why the regiment should not have lain over every Sunday to rest and recuperate, to allow the men to bathe and wash their underclothing, etc.; but this was never done.

The regimental commander was fond of regimental drill while on the march, generally as we approached camp. When officers, men and horses were tired, dusty, thirsty and anxious to get into camp, drilling was worse than useless, and certainly did no good.

We, of course, did not know what orders, or exactly what authority, the battalion commanders had, but anyone acquainted with them would believe that, if they had had proper orders to inspect the troops under them, to supervise the fitting of saddles, the care of sick horses, the grazing of the herds, and similar matters, they would have attended to them.

The large number of sore-back horses was due primarily to the careless fitting of saddles, and, possibly, to improper folding of the saddle blanket, but largely to the gross carelessness and inattention of the riders, to whom, in this respect, too little attention was paid by troop commanders. Once or twice the commanding officer ordered men who had sore-back horses to walk and lead them; but this was spasmodic, and only lasted two or three days.

At last all was ready, and the regiment moved out on its long march for the Dakotas. The line of march was via Springfield, Kansas, and Hardy, Nebraska, to old Fort Kearney, where we had one day's rest; then west along the Union Pacific Railroad to Fort Sidney. This was probably the hardest part of the march. Rain fell almost continuously, the black soil of the prairies was cut up into unfathomable mud, the road which closely followed the railroad had probably been little used and never repaired, and, taking it

altogether, the progress made was better than could have been expected.

We lay over one day at Fort Sidney, and then struck out almost due north for the Black Hills. It was now September, the days only pleasantly warm, the nights cold and crisp; on September 3d, we arrived at our Mecca, Fort Meade, Dakota Territory, and our journey was practically finished.

The headquarters and six troops remained here, while two troops went to Fort Yates, Dakota, two to Fort Keogh, Montana, and two to Fort Buford, Dakota. The total distance from Fort Concho to Fort Meade was 1,470 miles, taking eighty two marching days—an average of about eighteen miles per marching day.

One day was spent at Fort Sill, one at Fort Reno, four at Fort Riley, one at Fort Kearney, one at Fort Sidney, four at Willow Island and one at Fort Robinson.

The troops that went on had tiresome marches yet to make—the two that went to Fort Yates two hundred and twelve miles; those to Fort Keogh about the same, while all are entitled to credit for the additional distances from their respective posts in Texas to Fort Concho. Troop E marched from Eagle Pass, Texas, to Fort Buford, about 2,400 miles.

So far as known, this was the longest continuous march ever made by a regiment in this country, and perhaps in any other.

What the object of the "powers that be" was in requiring us to march instead of going by rail, has always been a mystery. It was rumored that it was to test the marching powers of men and horses, and if this were true, it certainly did, much to their detriment. It is impracticable now to say how many horses died or were abandoned en route, but the number was large, and at the average cost price then, \$150.00 each, this item of expense must have been heavy; and adding the cost of delivering rations, purchasing forage, wood and water, loss of equipment, wear and tear of wagons, hire of civilian wagons, it is believed the entire regiment could have been transferred by rail very much cheaper; not taking into consideration the men lost by desertion, many of whom

deserted from fatigue and disgust alone, and the loss of some officers and some men, who broke down from the fatigues of the march, and had to quit the army.

If it was for experience, we certainly got it, and it gave us something to talk about for some years; and many a lurid yarn, spun for the edification of the youngster just escaped from West Point, began "When we were marching from Texas to Dakota —."

That the march resulted in any practical good is difficult to see. It was a heavy expense to the Government, a heavy expense to the officers and married soldiers, some of whom had to leave their families for months in Texas, before they could save enough money to bring them North; it wore out the patience of all; it produced no decided impression on the regiment, save of relief when it was over.

The conduct of officers and men was admirable. The good humor under adverse circumstances was remarkable; and while some had their nerves strained to the breaking point, and one or two literally fell out of the saddle and had to be retired, all tried to make the best of it.

One hesitates to criticise a brother officer who is no longer in harness, or this more or less critical account might have been made much more pointed. To err is human, and no doubt if those high in authority had had to do it over again, matters would have been different.

This paper cannot be closed without expressing the opinion that the commanding officer of the regiment did the best he could under adverse circumstances. His kindness, cordiality, unvarying good nature, and the encouragement he constantly held out, certainly helped to make matters easier than they otherwise would have been.

Of those who made part, or all, of the march, only five officers now are in the regiment: Captains Slocum, Flynn, Duff, Sayre and Evans, and eight enlisted men. Others have, by promotion, been transferred to other regiments; some have been laid on the shelf to rust, while to others have come the last bugle call; "taps" have mournfully wailed over the soldierly forms of Mizner, Bernard, Morris,

Weeks, Sprole and Williams, who have all gone to report to "The Great Commander."

The Spanish War, service in Cuba and the Philippines, have given the loungers in the Officers' Club other subjects to discuss, and the great march of the Eighth Cavalry in 1888 has been relegated to the official records, and, perhaps, is only remembered often by the few still living, who have hung up the saber and the spurs, and doffed the uniform for sober civilian attire, but who, all the same, when the army paper comes, turn first of all to the column showing the changes in "The Old Regiment." There their hearts still are; there memory loves to linger; and they fondly hope that the comrades of olden days still remember them.

THE FIRST ACT OF THE LAST SIOUX CAMPAIGN.

BY CAPTAIN PETER E. TRAUB, THIRTEENTH CAVALRY.

THERE is a little bit of unwritten history that may well serve as a prelude to the capture and death of Sitting Bull. This prelude we shall name "Buffalo Bill's unsuccessful attempt to arrest Sitting Bull."

In the fall of 1890, it was the design of the division commander, Major General Nelson A. Miles, to anticipate the movements of the hostile Indians, and arrest or overpower them in detail before they had time to concentrate in one large body. In pursuance of this design, it was deemed advisable to secure, if possible, the principal leaders and organizers, namely, Sitting Bull, Hump, Big Foot, Short Bull, Kicking Bear, and others, located on the various Sioux reservations, and remove them for a time from that country.

On November 25, 1890, General Miles gave to William F. Cody authority to proceed to Standing Rock Agency, and to induce Sitting Bull to come with him, making such terms as he (Cody) might deem necessary. If unsuccessful in this, Cody was authorized to arrest Bull quietly, and remove him quickly from his camp on Grand River to the nearest military station, Fort Yates. In his report of the affair General Miles says: "He proceeded to Fort Yates, on the Standing Rock Reservation, and received from Lieutenant Colonel Drum the necessary assistance, but his mission was either suspected or made known to the friends of Sitting Bull, who deceived him (Cody) as to Sitting Bull's whereabouts."

Let us see the why and wherefore of Buffalo Bill's failure.

In November, 1890, General Ruger was ordered by the President to make a personal investigation of the actual condition of things among the Sioux. While at Standing Rock

Agency he was informed by Indian Agent James McLaughlin that it was practicable and advisable to have the actual arrest of Sitting Bull and other disaffected leaders on that reservation made by the Indian police, both for the certainty of their capture, and for the beneficial effects that would result in strengthening the authority of the agent and establishing the proper position of the Indian police. The Indian police might possibly make the capture without bloodshed or much excitement among the Indians. Sitting Bull's men were, moreover, constantly hanging about the agency, ostensibly to have wagons repaired or for some other purpose, but really to keep him informed. This, in connection with the fact that Sitting Bull lived forty miles from the post, and that an Indian on a fleet horse would reach him before a troop of cavalry could possibly get there, decided the authorities in favor of having the actual arrest made by the Indian police.

While Colonel Drum, commanding Fort Yates at Standing Rock, and Agent McLaughlin were making plans for the capture of Sitting Bull, and perfecting the details for carrying them into execution the moment the orders came, William F. Cody, commonly known as Buffalo Bill, appeared at Fort Yates with the authority of the division commander to make the attempt to bring in Sitting Bull, either peaceably or by force, and for this purpose the commanding officer was directed to furnish transportation and a few trusty men.

This was on November 27th; it produced consternation on the part of Drum and McLaughlin. The probability was much against the success of this expedition. Failure meant the escape of Sitting Bull and his following; their flight to Pine Ridge and the presence of the leader of the Sioux malcontents amongst the disaffected element in the Bad Lands along White River; the beginning of actual hostilities before the troops were in position around Pine Ridge; the probable destruction of property, looting of homes of settlers, and perhaps all the attendant horrors of Indian warfare—murder, rapine and mutilation. But Drum and McLaughlin were the right men in the right place. The former at once telegraphed the gravity of the situation to General Ruger,

desiring, above all, to know whether the order was by proper authority. General Ruger was very much surprised, as it was the first he had heard of the subject, the orders to Cody never having been transmitted to him. He at once telegraphed to Washington, through proper military channels, throwing the great weight of his experience and highly respected opinion against any such attempt at that time. McLaughlin telegraphed to the Secretary of the Interior in the most emphatic terms, and we will leave their telegrams speeding towards Washington, and return to Fort Yates.

By hook or by crook Buffalo Bill must not be permitted to start on his errand. He must be detained until replies come back to McLaughlin's and Drum's telegrams. Stratagem, trickery, if you please, had to be resorted to, but the end justified the means. Bill was induced by the hospitality of the officers to stay at Fort Yates all that day; but great was everybody's surprise to see him emerge from his host's quarters next morning smiling and happy, asking for his transportation, all ready for the start to Sitting Bull's camp. He could not be further dissuaded, and so set out for Grand River, the home of Sitting Bull, forty miles away.

This aspect of the case had been conceived of by both Drum and McLaughlin, and, as a last resort, they had thought of a device that acted like a charm. Its development will be seen as the story progresses. Bill proceeded to Oak Creek, about twenty miles. Here coming along the road toward the agency, he met Louis Primeau, an Indian scout and interpreter at Standing Rock Agency, upon whom McLaughlin had counted in thwarting Buffalo Bill's attempt. Primeau and Bill were well acquainted, and the former was questioned as to Sitting Bull's camp and his whereabouts. Primeau replied that Bull had had a dance Friday night, and had said he intended going to Standing Rock that very next day to see his old friend, Agent McLaughlin; that Buffalo Bill must have missed him on account of Bull's having taken the north road to the agency instead of the south one. To make doubly sure, he advised Bill to cut across country to the north road, and in case wagon tracks were seen going towards the agency, they were made by Bull, thither bound. This the party did,

and by proper manipulation wagon tracks were seen leading to Standing Rock, and Buffalo Bill turned back from Grand River, where Sitting Bull was probably at that moment haranguing his followers.

In the meantime, Colonel Drum had been very anxiously awaiting orders from superior authority. He kept Indian couriers at the adjutant's office, ready to leave at a moment's notice to overtake Cody. The message finally came, and that there should be no mistake, Indian couriers were sent over both the north and south roads; but it so happened that while they were passing in the vicinity of Oak Creek, Buffalo Bill was cutting across country between the two roads so as to strike the north road. The Indian scouts, therefore, on both roads missed him, and they went on towards Sitting Bull's camp with great care, and found everything quiet, Sitting Bull there, and no Cody on either road; and those scouts wondered.

Colonel Drum was a little alarmed at not hearing from the scouts by evening, and sent out two more on each road with copies of the President's dispatch; for it appears that the Secretary of the Interior and the Secretary of War went to Mr. Harrison in the middle of the night, and, with his own hand, the President wrote the dispatch that William F. Cody, known as Buffalo Bill, should not attempt the arrest of Sitting Bull, or any other Indian whatsoever, and that he should leave the Indian reservation at once. The second courier on the north road found Cody in camp, about five miles out from Fort Yates. The message was delivered, and Cody wrote in pencil the following:

"The President's orders have been received and will be obeyed. I leave to-night.

(Signed) "WILLIAM F. CODY."

The next morning (November 30th) at 9 o'clock he left for Mandan. Colonel Drum and Mr. McLaughlin had thus, by foresight, ingenuity and prudence, avoided the danger of the possibility of an unsuccessful attempt to capture the wily chieftain, Sitting Bull, who was so soon destined to pitch his lodge in the happy hunting grounds.

CAPTURE AND DEATH OF SITTING BULL.

Sitting Bull was the acknowledged leader of the hostile element when the Sioux were at war. In order to remove him from the scene of trouble, orders were given on December 10th by General Miles, through General Ruger, to Colonel William F. Drum, commanding at Fort Yates: "Make it your special duty to secure the person of Sitting Bull. Call on the agent to coöperate and render such assistance as will best promote the purpose in view."

For reasons before stated, it was decided to make the arrest by Indian police, these to be supported by troops with orders to prevent a rescue, and, if necessary, protect the police. December 19th or 20th was agreed upon as the day to make the attempt, for then most of the Indians would be at the Agency for the issue of rations, and it was presumed that Sitting Bull would not come to the Agency, as he had not been there on the preceding ration day, but would remain at his home on Grand River. However, trustworthy information was received on the evening of Sunday, December 14th, that Sitting Bull was preparing to leave the reservation to join the hostiles at Pine Ridge, and it became necessary that there should be no delay in making the arrest. The number of Indian police about Bull's camp had been materially increased, under pretence of getting out logs for a building on Oak Creek, but in reality to watch his movements, and to become so acquainted with his camp, his house, and the surroundings, that even in the middle of the night they could effect his capture and removal.

Everything being ready, as soon as it was dark, orders written in Sioux and English were sent by two reliable Indians, to be read to Bull Head, the lieutenant of police, by an agency school teacher in that neighborhood. The order specified that Sitting Bull was to be arrested before daylight on the morning of the 15th, and brought to the agency, and that troops would be within reach in case a rescue was attempted. Later in the evening, orders were issued for Troops F (Slocum) and G (Crowder), Eighth Cavalry, six officers and a hundred enlisted men, Captain Fechét, Eighth

Cavalry, commanding, to march at 12 o'clock that night in the direction of Sitting Bull's settlement, for the purpose of preventing rescue, and, if necessary, to assist the police. It was the understanding that the police would send a courier to Oak Creek to inform the troops of the situation of affairs as soon as the arrest was made.

Although entrusted to Indians, all the details were perfectly executed. Up to 2 A. M. the 15th, a "ghost dance" and feast had been in progress at Sitting Bull's camp, and being tired out, the usual sentries around Sitting Bull's shack had fallen asleep. Not until the Indian lieutenant of police, Bull Head, placed his hand on the sleeping chief's shoulder at 5:30 A. M., had the latter any idea of going to the agency. He at once arose and remonstrated with the police. There was a slight delay in giving him time to dress. Sitting Bull's wives were quartered in a separate lodge, but in his own shack there slept Crow Foot, a deaf and dumb son of the old chief; between these two there existed the greatest intimacy. When the boy saw what was happening, he strained to the utmost the flaccid muscles of his throat and larynx, causing that unearthly sound, not loud yet disturbing. It was frequently repeated before the police gagged him; but unfortunately it had been heard by Catch-the-Bear, who emerged from his tepee just as Sitting Bull was being led away captive between Lieutenant Bull Head and Sergeant Shave Head. Sitting Bull called upon his followers to rescue him from the police, saying that if the two principal men were killed the rest would run away. Thereupon Catch-the-Bear fired, hitting and breaking Lieutenant Bull Head's thigh bone. As he was falling to the ground, Bull Head placed his pistol against Sitting Bull's side and fired, killing him. At least seventy-five warriors then attacked the forty Indian police, who, however, got possession of the shack and stable adjoining. The fight was hot, and volunteers were called for to carry a report of the situation back to the approaching troops. Hawk Man offered to perform this perilous mission, and at the imminent risk of his life, he slipped through the encircling hostiles, and carried the

news to Fechét, whom he met some three miles from Grand River.

In addition to his two troops of cavalry, Fechét had a Hotchkiss and a Gatling gun, under charge of Lieutenant E. C. Brooks, Eighth Cavalry. Throwing out a line of skirmishers, he disposed his troops in column of fours, an interval of three hundred yards between heads of columns, artillery between the heads, and advanced to the bluffs about 1,500 yards from Sitting Bull's house. About nine hundred yards to his right front, on a knoll, was a party of about fifty Indians. Beyond the house in the brush were more Indians. Shots were being exchanged. Fechét directed the Hotchkiss to be fired into this brush.

The effect was electrical; Indians began to scamper from the brush and retire across the river; a white flag was displayed by the beleaguered police from Sitting Bull's shack. The Hotchkiss was next trained upon the group on the knoll, and they dispersed, fleeing up the river. F Troop dismounted, advanced in skirmish line to and beyond the house. Crowder, with G Troop, mounted, protected the right flank and followed the retiring Indians up Grand River for two miles, when he was recalled. The skirmish line went about 600 yards beyond the house, clearing the brush, and then returned, leaving pickets at the farthest points.

When the troops came up the Indian police filed out of the shacks and formed company front, and reported the absentees, four killed, two mortally wounded, one badly wounded; but there was sufficient evidence of the noble defense they had made. Eight dead hostiles, including Sitting Bull, three wounded, and two relations of Sitting Bull, prisoners.

Captain Fechét's orders were explicit and did not include a pursuit of Sitting Bull's band, which would have resulted in unnecessarily frightening peaceful Indians. Accordingly the command moved back to Oak Creek, and couriers and runners were sent in all directions reassuring the peaceably inclined and urging all others to remain on the reservation

and come in to the agency, as that was the only safe place for them.

Over 400 Sitting Bull Indians, men, women and children, fled south to the Cheyenne River reservation. Of these, 160 surrendered in a few days to Agent McLaughlin, at Standing Rock, and eighty-eight others, who had reached the Moreau River, returned and surrendered to him within two weeks. Of the remainder, twenty joined the hostiles at Pine Ridge, thirty-eight joined Big-Foot's band on Cheyenne River, and 166 surrendered to Captain Hirst and Lieutenant Hale at the mouth of Cherry Creek. Thus ended the first act of the campaign, and peace was restored on Standing Rock Reservation.

THE SANTIAGO CAMPAIGN OF 1898.

BY LIEUTENANT COMMANDER W. L. RODGERS, U. S. NAVY.

[Lieutenant Commander Rodgers delivered a series of very interesting and instructive lectures to the classes at the Infantry and Cavalry School and Staff College on the "Influence of the Navy Upon Land Operations." The following is an extract from the last of these lectures. As it shows certain phases of the Santiago campaign not generally understood by the Army, it will be read with much interest by army officers, especially those who participated in the campaign.—EDITOR.]

WE now take up the campaign of Santiago in the Spanish War in 1898. This campaign is selected to contrast with the Mississippi campaign, for the reason that in the Spanish War the Army was strategically subordinate to the Navy, thus reversing the relations of the two services on the Mississippi.

THE PLANS CONSIDERED BY THE ADMINISTRATION.

The declaration of war against Spain was made for the object of delivering Cuba from Spanish occupation, and Cuba was necessarily the principal theatre of operations. The Spanish army of occupation could be brought to terms either by starving it into surrender by a blockade of the island, which was already devastated and disordered, or a field army could be thrown into the island to attack the Spaniards.

The first plan was not seriously considered, not only because the U. S. Navy was not thought strong enough to surround the entire island with a close blockade, but also because the inhabitants of the island would suffer with the Spaniards.

The second plan was favorably viewed, and the administration wished to put 70,000 men ashore in Cuba near Havana to oppose the Spanish army in the western part of the

island, and it was expected that the operations of this army would be the principal feature of the war. As such an army did not exist at the outbreak of the war it was necessary to recruit and organize it.

Success, however, would strongly incline to that one of the two combatants who should preserve his communications with home. As Cuba is an island and the sea is the only means of communication, it was impossible for the United States to think of launching an army against the principal Spanish position about Havana until a decisive naval battle should enable the army to embark without any anxiety for the subsequent security of communications. Accordingly the news of the departure of Cervera's squadron for the West Indies was welcome to the administration, as it hastened the solution of the problem by bringing the Spanish fleet, an essential factor in the situation, within the theatre of operations.

Thus the administration's plan at the outbreak of war was to attack the Spanish army in Cuba as soon as the American army could be mobilized in adequate force. It was not expected that the navy's action upon communications would prove decisive by itself.

THE UNITED STATES GOVERNMENT ATTEMPTS TO CUT THE
SPANISH LINE OF COMMUNICATION BY THE DE-
STRUCTION OF THE SPANISH FLEET.

When reports reached Washington that Cervera had entered Santiago de Cuba it was the immediate wish of the Navy Department to verify the news, and then retain him under observation until a sufficient force could be assembled to destroy him. Although the defenses of Santiago were far from strong, yet the guns and mines offered proper support to each other, besides having the Spanish fleet in reserve, so that were the navy to attempt to force its way in alone it would very possibly lose a ship or two. In the threatening condition of the relations of the United States with continental Europe, it was impossible for the administration to contemplate with equanimity even the smallest

reduction in our naval force, and imperative orders were sent to Admiral Sampson not to take undue risks against forts.

For these reasons it was arranged by the War and Navy Departments, at the suggestion of the latter, that as soon as the navy should blockade the Spanish fleet, a sufficient force of troops should be sent to aid the navy in opening the harbor preliminary to attacking the Spanish fleet.

On the 27th of May the Navy Department informed the War Department that it expected soon to be able to call for the army to move. On May 29th a sufficient force arrived before Santiago to make the blockade effective, and the same day it verified the presence of the Spanish fleet within, and reported the facts to Washington by cable from Hayti. On May 31st General Shafter was directed to move his army corps to Santiago in the following terms:

“ * * * You are directed to take your command on transports, proceed under convoy of the navy to the vicinity of Santiago de Cuba, land your force at such place east or west of that point as your judgment may dictate, under the protection of the navy, and move it on to the high ground and bluffs overlooking the harbor or into the interior, as shall best enable you to capture or destroy the garrison there, and cover the navy as it sends its men in small boats to remove torpedoes, or with the aid of the navy capture or destroy the Spanish fleet, now reported to be in Santiago. * * You will coöperate most earnestly with the naval forces in every way, agreeing beforehand upon a code of signals. Communicate your instructions to Admiral Sampson and Commodore Schley.”

If each clause in the first and principal sentence of this order is duly weighed, it becomes apparent that it was the intention of the War Department to prescribe a movement for the capture of the garrisons of the harbor forts for the purpose, as the order explains, of covering the navy in its work of clearing the channel by its small boats. As an omnibus clause, indicating the scope of the entire campaign, the sentence concludes with the general direction, “with the aid of the navy, capture or destroy the Spanish fleet.” Unfortu-

nately there exists a verbal ambiguity in the construction of the sentence (very possibly due to a desire to facilitate the enciphering) and this ambiguity, if the clause referring to covering the small boats of the navy be not fully appreciated, might allow the recipient to regard as his objective the garrison of Santiago.

It is thus seen that the administration was not contemplating the military expedition to Santiago as a substitute for the great enterprise against Havana, which it had debated a month earlier. It was not even a diversion in favor of the Santiago campaign. On the contrary, the expedition to Santiago was intended as, and expected to be, solely an auxiliary to the naval campaign, which was seen to be a necessary preliminary to any field operations against Havana.

How correctly the administration viewed the situation, as one governed by the question of sea communication, is apparent when we recollect that the report of a Spanish squadron on the north coast delayed the departure of the expedition until it was shown to be unfounded. Nevertheless the administration did not look as deeply into the question of Spanish communications as did Admiral Sampson, who telegraphed to Washington on June 26th that, in his belief, success at Santiago would terminate the war.

THE GENERAL NAVAL SITUATION.

On June 1st the arrival of Admiral Sampson at Santiago made the blockade an effective one. At this time a reserve squadron was fitting out in Spain and news of its completion was daily expected. Owing to its central position with regard to the two theatres of war in the West Indies and the Philippines, it had a free choice of its field of operations, and at Washington it was believed to be sufficiently strong to turn the balance of strength in either field.

PRELIMINARY NAVAL OPERATIONS.

As General Shafter's force was delayed at Tampa for lack of transportation so that Cervera was temporarily secure from attack, the Navy Department became very anxious to con-

tain his force in such a way that Admiral Sampson might be able to detach a division to act against the Spanish reserve squadron. The collier *Merrimac* was therefore sent into the channel and sunk there on the night of June 3d, in order to prevent the egress of Cervera's squadron. On June 6th, the forts at the harbor mouth were bombarded and silenced by the fleet, but suffered and inflicted no material damage. Although the forts were thus shown to be unable to oppose the fleet, the topography of the entrance was such that the heavy ships could not cover and protect the small craft from infantry fire should the latter be sent to clear the channel of mines and obstructions. In reporting the affair Admiral Sampson urged the immediate despatch of the troops, and, still erroneously believing that the *Merrimac* closed the channel, he suggested that delay in the arrival of the army would give the Spaniards an opportunity of removing the ships' guns to add to the land defenses, and stated that forty-eight hours after the arrival of troops the city and fleet would be captured.

THE SEIZURE OF A NAVAL BASE.

On June 10th the lower part of Guantanamo Bay was occupied by the fleet as a base for carrying on the blockade of Santiago, and a battalion of marines was landed to secure the ships from annoyance by the enemy on shore.

ARRIVAL OF THE U. S. ARMY. THE INTENTION OF THE COMMANDING GENERAL.

On June 16th the forts at Santiago were bombarded again and readily silenced. On June 20th the army arrived off Santiago, and after consultation between General Shafter, Admiral Sampson and the commander of the Cuban irregular troops, it was agreed that the army assisted by naval boats should land about eighteen miles east of the harbor and march to attack the forts at the harbor mouth entrance; and that to facilitate the landing, feints should be made both east and west of the entrance, and that the navy should shell the landing place in order to drive away any possible

opposition. The 21st was occupied in arranging details and issuing necessary orders. On the 22d the disembarkation began. On this day General Shafter wrote to Admiral Sampson, saying he would advance on Santiago as soon as he could, and requested Admiral Sampson "to keep in touch during the advance and be prepared to receive any message I may wish to transmit from along the bluff or any of the small towns, and to render any assistance necessary," thus showing his intention of attacking the harbor forts. About 6,000 men were landed on the 22d, and a strong force was sent to the west and seized a second landing place about eight miles down the beach, where troops and stores were landed on the 23d. About 6,000 more troops were landed this day, and all the troops, 16,000, were on shore on the 24th; but it was very difficult to establish a reserve of stores, as landing on an open beach is not easy.

THE ARMY MOVES CONTRARY TO THE GENERAL'S INTENTION.

The orders for the 24th of June contemplated the retention of a position near the landing place at Siboney until a sufficient reserve of stores had been accumulated on the beach; but General Shafter's headquarters remaining on board ship, the senior officer on shore, upon his own responsibility, directed an advance towards the rear of Santiago, and committed the army to a plan of operations which the Commanding General had not thought of. Not only did this movement forsake the key of the military position and throw away naval coöperation, but it entailed great difficulties in supply, owing to the expedition's lack of transport and to the bad roads, difficulties which would have been avoided had the army remained near the beach.

Under these circumstances the navy could do no more than maintain a close blockade and see that during operations thus prolonged the army should not suffer by having its store ships driven away.

On June 28th General Shafter learned of the advance of Spanish reinforcement marching from the west, and on June 29th he moved his headquarters on shore and arrived at the

fort the following day. On June 30th General Shafter notified Admiral Sampson that he would attack the city the next day, and that he would make a demonstration with a regiment against Aguadores, three miles east of the Morro, and requested the Admiral to support this demonstration in order to divert the defense before the city. Here we see that the movement along the beach upon the harbor forts, which the administration had contemplated as the principal one in front of Santiago, was reduced to the rôle of a simple demonstration, and that the major and minor operations had exchanged parts in the mind of the Commanding General. The navy carried out its share in this demonstration, as requested, on July 1st and on the following day also; but, although the ships present repeatedly assured the coöperating brigade that an advance would find the enemy's position abandoned, yet no movement was made to take possession, and a very promising opportunity was completely lost. On July 1st the American troops made a general attack on the outer works of the Spanish position outside of the city which was successful and was continued the next day; so that by the 3d of July the investment was complete on the north and east sides of the city. Nevertheless, in spite of his success, the General informed Washington that he thought of falling back from the position he had just won, owing to difficulties in supplying his troops from Siboney.

THE PROPER ROLE OF THE ARMY WITH RELATION TO THE
NAVY AND THE CAMPAIGN IS LOST SIGHT OF.

On July 2d a very interesting correspondence occurred between Shafter and Sampson. Shafter first telegraphed to Sampson:

"July 2d. Terrible fight yesterday, but my line is now strongly entrenched about three-quarters of a mile from town. I urge you to make effort immediately to force the entrance to avoid future losses among my men, which are already very heavy. You can operate with less loss of life than I can. Please telephone answer.

"W. R. SHAFTER,
"Major General."

The following reply was telephoned by Sampson's flag lieutenant:

"Admiral Sampson has this morning bombarded forts at entrance of Santiago and also Punta Gorda battery inside. Do you wish further firing on his part? * * * Impossible to force entrance until we can clear channel of mines, a work of some time after forts are taken possession of by your troops. Nothing in this direction accomplished yesterday by the advance on Aguadores."

Shafter replied as follows:

"It is impossible for me to say when I can take batteries at entrance to harbor. If they are as difficult to take as those we have been pitted against, it will be some time and a great loss of life. I am at loss to see why the navy cannot work under a destructive fire as well as the army. My loss yesterday was over 500 men. By all means keep up fire on everything in sight of you until demolished. I expect, however, in time, and sufficient men, to capture the forts along the bay. "SHAFTER."

TO PRESERVE HARMONY WITH THE GENERAL, THE ADMIRAL
OFFERS TO SACRIFICE THE PROPER PRINCIPLE AND
RISK THE COMMAND OF THE SEA.

To this Sampson replied in a letter from which the following extract is made:

"Our trouble from the first has been that the channel to the harbor is well strewn with observation mines, which would certainly result in the sinking of one or more ships if we attempted to enter the harbor; and by the sinking of a ship the object of the attempt to enter the harbor would be defeated by the preventing of further progress on our part. It was my hope that an attack on your part of these shore batteries would leave us at liberty to drag the channel for torpedoes. If it is your earnest desire that we should force our entrance I will at once prepare to undertake it. I think, however, that our position and yours would be made more difficult if, as is possible, we fail in our attempt. We have in our outfit at Guantanamo forty countermining mines which I will bring here with as little delay as possible, and if we can succeed in freeing the entrance of mines by their

use, I will enter the harbor. This work which is unfamiliar to us will require considerable time. It is not so much the loss of men as it is the loss of ships which has until now deterred me from making a direct attack upon the ships within the port.

"W. T. SAMPSON."

Thus we see that the Commanding General, having allowed the act of a subordinate contrary to positive orders to commit the army to a difficult line of operation, ill suited to the early attainment of the object of the campaign, and having met with more difficulties in his operations than he had previously expected, and foreseeing others to come, then called upon the navy to save him from the consequences of his act by doing the very thing to prevent which the army had been sent out. General Shafter shows that he regarded the problem before him and the Admiral as simply a question as to whether the additional loss of life necessary to conclude the campaign, should be made to fall upon the army or the navy, and, as the army had lost 500 men, he intimated it was now the turn of the navy to suffer an equal loss before the army should be expected again to exert itself.

Really the situation was very different. Every commander-in-chief afloat or ashore must consider the political situation of the country as controlling the military action, and in modern times the telegraph to headquarters nearly always confers the means of executing this duty in a way satisfactory to the administration. In the present case it was a matter of notoriety that continental Europe was unfriendly towards the United States, and the administration feared that the loss of a single United States battleship, without corresponding loss to the Spanish fleet, might serve to crystallize a coalition against the United States which would be more disastrous than any loss of life, either in army or navy, which reasonably could be expected in front of Santiago. Moreover, should the United States lose a ship in the channel while forcing its way in, the channel might be obstructed so that the fleet would be divided into two parts, the one inside too weak to cope with Cervera's force, and the other unequal to the Spanish reserve squadron. In this case the transport fleet of the U. S. Army would be very vulnerable,

and an attack on it would cause the force in front of Santiago to starve as the reserve of supplies on shore was too small.

THE SORTIE OF THE SPANISH FLEET SAVES THE AMERICAN
FLEET FROM ERROR.

A personal interview was arranged between the two commanders-in-chief to reconcile their views, but before it could take place the Spanish fleet came out and was destroyed on July 3d. On the same day the Spanish reinforcing column entered Santiago. On July 4th General Shafter sent word to the city of the loss of the fleet and demanded its surrender.

ATTEMPT OF THE GENERAL TO PERSUADE THE ADMINISTRATION TO RISK THE COMMAND OF THE SEA.

On the same day he renewed his request to the Admiral to have ships force the entrance, and sent the same request to Washington, asking for 15,000 troops additional in case the navy should not enter. He failed to see that, although the capture of the city and garrison was now the sole object of continuing the campaign, owing to the elimination of the Spanish fleet, yet this did not affect the military situation at Santiago, whose key remained, as before, on the hills at the harbor mouth, where the navy could offer tactical support without unduly risking the command of the sea. Not only had sickness made its appearance in the army, but the bad season was approaching, and passing supplies over a surf-beaten beach was a task of difficulty. Even then, had the detachment at Aguadores been sent against the harbor forts, supported by the fleet, the clearing of the channel would have enabled the naval guns to complete the investment of the city to the west; would have brought the garrison under the heavy guns of the fleet, and would have transferred the base from the uncertainties and difficulties of an open sea beach to the security of a fine harbor, besides avoiding most of the difficulties of forwarding supplies from the base.

The General telegraphed to Washington on July 5th: "The only safe and speedy way is through the bay; am now in position to do my part." He had forgotten what he had acknowledged to Admiral Sampson before landing, that the key of the situation was the harbor forts. The President ordered a conference between the Admiral and General, to agree upon a joint plan.

THE NAVY AGREES TO UNDERTAKE CAPTURE OF THE HARBOR
FORTS BUT WILL RISK ONLY SMALL SHIPS.

On July 6th, they decided that three days' truce should be given to the Spaniards to deliberate in regard to surrender, after which, in case of refusal, the navy should bombard the city from the sea. Should this prove indecisive, the navy would then send one thousand marines with some Cubans to assault the Socapa batteries, after which some of the smaller ships of the squadron would try to enter (after countermining). That is to say, it was now agreed that the navy should undertake the land assault upon the forts, while the army was to retain the Spanish force within the city. That the navy now felt able to assume this task was due to its recent success against Cervera's squadron, and to the unprepared condition of Camara's squadron in Spain, which rendered a surprise by the latter impossible.

SURRENDER OF SANTIAGO. IT INVOLVES ALL THE TROOPS
OF THE DISTRICT.

Firing had ceased on July 4th, and negotiations for surrender continued until the afternoon of the 10th, when the artillery of both sides opened and the ships outside added a long-range fire against the city. On July 11th the bombardment was renewed afloat and ashore, and the investment of the city was made continuous. In the afternoon firing ceased for the last time. Negotiations for surrender were resumed until the 16th, when the surrender was completed, to include all Spanish troops in the eastern extremity of the island.

This wide-reaching surrender was the direct result of the destruction of the Spanish fleet; for the controlling element

in the military situation in the opposing lines and, indeed, throughout the province, was the question of communications and supplies. The blockade was starving the Spanish army, and after the Spanish fleet was destroyed there was no hope of raising the blockade, so Santiago was ready to surrender. In fact, the Spanish government soon perceived its inability to hold the rest of Cuba and grasped the lesson sooner than did our own, although Sampson had early perceived that success at Santiago probably would terminate the war. Thus 150,000 Spanish regular troops were forced to evacuate Cuba without having seen an enemy, because the hostile navy operated successfully on their communications.

THE MOVEMENT ON PORTO RICO.

The movement on Porto Rico was another blow at Havana, as it deprived Cuba of a necessary intermediate base on the route to Spain; but the destruction of the Spanish fleet so completely interrupted communications that the attack on Porto Rico was superfluous, and did not hasten the conclusion of peace, but merely served to throw that island into United States possession when the peace was signed.

REVIEW OF THE CAMPAIGN.

In this campaign it is a noteworthy fact that the administration proposed to itself a military campaign against the principal Spanish army, but it did not realize the efficacy of the preliminary measure which it undertook in order to secure the command of the sea. In consequence it was surprised when that step proved sufficient to terminate the war.

The principal movement of the army of the United States in this campaign was deferred until its sea communication should be assured through the destruction of the Spanish fleet. The more active part of the campaign fell to the share of a large detachment of the army operating eccentrically in a region outside of the intended main theatre, while in spite of its strategic predominance the navy played a part tactically secondary, except at the instant of the sortie of the Spanish fleet.

The complete success attending the movement against the Spanish communications was because the local population was not the object of attack.

It was not the object of the United States to conquer and overrun a hostile territory. On the contrary, its desire was to expel a hostile force from friendly territory. It was unnecessary to seek out the main Spanish army, for this end could most readily be accomplished by directing the navy against the communications of the hostile force. To hold these communications securely it was necessary to defeat the Spanish fleet, and the navy called for the assistance of the army in getting at it. Therefore, in this campaign, the army was strategically subordinate to the navy.

The army was sent to act as an auxiliary to the navy in a naval campaign. The Commanding General misunderstood this point to such an extent that he thought the military operations were the principal ones, and called on the navy to sacrifice itself and risk the success of the campaign to further his own immediate object. Had the forts at the harbor mouth been taken on June 24th or 25th, as probably they might have been, and the Spanish fleet destroyed a day or two later, it is possible that the Spanish garrison of Santiago would have marched into the interior, and the loss of life before Santiago would have been avoided. In this case the Porto Rican campaign would have given the military blow which Spanish honor required before evacuating Cuba, and the war would have ended no later than it actually did. But Cuba was untenable after July 3d, when the Spanish fleet was destroyed.

It is further to be noted that the navy captured and held the advanced base of operations necessary to it without calling on the army for assistance, employing the Marine Corps for the purpose.

GENERAL CONCLUSIONS.

Strategic Principle.

If now we compare the influence of the Navy upon military operations in the cases we have cited, we may draw the following conclusions applicable in all periods. The strategic principle is invariable that the fleet's primary duty is to cover the communications of its own army and embarrass or destroy those of the enemy.

This strategic objective it accomplishes in one way, by destroying the commercial and naval shipping of the enemy. Any diversion of the naval strength from this purpose is perilous.

When pressure on the sea communications will effect the purpose of the operations, the army should act in support of the navy and allow the latter to take the principal share of the work

Duty of the Navy Towards the Army.

Tactically the navy may and should support the army with its peculiar combatant strength when it is in sufficient force not to risk disaster to the communications by losses incurred in aiding the army's battle.

When an army is in retreat the navy may support and aid it in battle to a degree not permissible in the case of an advancing army, since the immediate safety of the army is then more pressing than the question of its communications.

Duty of the Army Towards the Navy.

On the other hand, it is the duty of the army towards the navy to provide and hold such naval bases as are essential for the performance of naval work upon the lines of communication. Should a hostile fleet take refuge in a fortified port, the army must undertake the principal part in driving it out, or capturing it, and must expect to see the navy refuse to risk itself in supporting the army in attacking the main defenses of the place.

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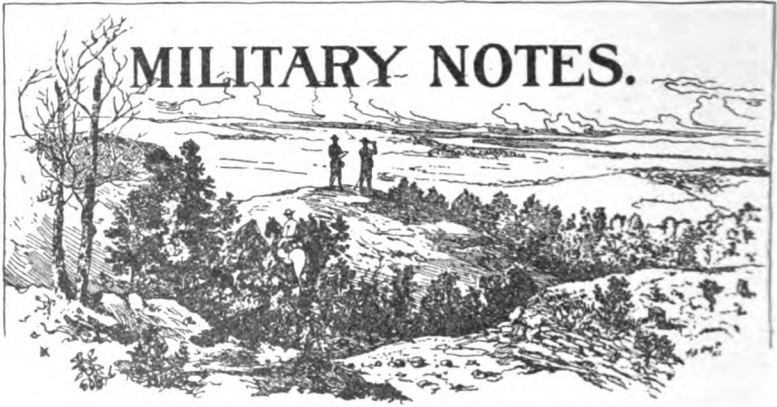
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THE WEBLEY-FOSBERY AUTOMATIC REVOLVER.

BY MAJOR A. G. HAMMOND, THIRD CAVALRY.

REFERRING to the article by Captain Vidmer, Eleventh Cavalry, in the January number of the JOURNAL, on the Webley-Fosbery automatic revolver, I would like to say that I have made quite a study of this revolver, and believe it will prove a useful and durable arm. Like Captain Vidmer, I do not propose to bring up a discussion of the merits of a large caliber pistol, for I believe we are almost, if not quite, a unit on that subject.

Through the kindness of Mr. Joseph Devlin, the Exposition representative of the manufacturers, we were enabled to have a thorough trial of the pistol, he having sent to England for a supply of "cordite" ammunition for it.

I personally fired a large number of rounds with this pistol. The targets made were very good, and during the trial no defect in the mechanism was made apparent. There is none of the "throw-up" experienced with our 45 revolver, as formerly used, and the accuracy of the target was, so far as I observed, dependent on the individual skill of the operator.

All revolvers, without doubt, have a certain amount of loss of gas, owing to the almost inappreciable space between the cylinder and the barrel; but why should we desire a revolver whose killing range is beyond seventy-five yards? If it has sufficient stopping shock within that distance, it appears to me to be sufficient.

Should there prove to be sufficient use of the pistol in this country, it is practically sure that our ammunition manufacturers will make the necessary ammunition for it, so as to render it unnecessary for us to purchase the ammunition abroad.

With a supply of clips, ready loaded, and carried in either the pockets of the service blouse or in a belt with pockets, the revolver can be reloaded in an almost inappreciable time, and it is quite possible that some lives that otherwise might be lost, could be saved at the expense of the other man's.

During our trials no weakness was developed, though the tests were as thorough as the brief time permitted. The "grip" of the pistol is good and fits the hand well.

For those, if any there be, who desire a smaller caliber, there is also manufactured a .38, the chamber of which holds eight cartridges.

I have so much faith in this revolver that I have already placed an order for one with the manufacturers.

BY MAJOR H. L. RIPLEY, EIGHTH CAVALRY.

When the description of the Webley-Fosbery automatic revolver first came to my notice I was very favorably impressed with it on account of its apparent simplicity, its strength, and the absence of that delicate mechanism which appears in most of the prominent automatic pistols of the day.

It is not a new revolver. It has been for several years before the English people, but it is only comparatively lately that it has been perfected by its makers.

I requested Warnock & Company, who handle it in this country, to send me one for a closer examination and trial. They sent me one of 45 caliber, and 100 rounds of cartridges charged with cordite and made for the revolver.

Closer examination of the revolver itself still further impressed me with its adaptability to our service. I then took it to the range and fired it. Here, as an automatic revolver, it was a complete failure. Not a single shot fired carried the upper portion back, thus revolving the cylinder and cocking it. Other officers of my regiment—excellent pistol shots—were also present and fired it, but with the same result. It was simply a single shot pistol, and a poor one at that, as it took both hands to push the upper part back and thus revolve the cylinder and cock it after each shot.

Several times by working it back and forth by hand, the revolving stud traveled the same road, and the cylinder which was turned half-way to the new cartridge when the upper part was away back, was turned back again, when it went forward; thus presenting the fired shell a second time to the firing pin, which would cause a miss-fire.

I returned it to Warnock & Company, and have since been informed that it had been sold to another party, and no complaints had been received as to its working.

I am, however, by no means prepared to condemn this class of revolvers on account of my experience with the one I tried. I believed then, and I still believe, that something was wrong with the particular one I had. It required considerable strength when using both hands, to start the upper part back, more force than the recoil would produce, but once started, it went well enough.

As regards accuracy, I did not find it as accurate as our present 38 caliber service revolver, and it is much inferior in that respect to the officers' model Colt 38, or the officers' Smith & Wesson 38, which latter are most excellent shooting revolvers; but I prefer the Colt on account of its superior grip and front sight.

The Webley-Fosbery was advertised to use our service 45 ammunition, but it could not be used in the one I had. It was a trifle too large to go fully into the cylinder.

It is very desirable that any officers' pistol should use the service ammunition. That this one does not, is an objection, though not an insurmountable one. The revolver is well described by Captain Vidmer in his article in the January JOURNAL, though he omits to mention a little triangular device on each side in front of the cylinder, which enables it to be thrust home into the holster, without catching in the front of the cylinder as our service revolver does.

If the automatic mechanism always works as it is claimed it does, I believe it the best revolver yet offered for our service. It is simple, very strong, sufficiently accurate, not liable to get out of order in the hands of a recruit, and there is no question as to the stopping power of the 45 caliber. At the same time, as compared with our 38, it is heavy and feels clumsy at first.

Is it, or will it ever be, safe to put any automatic pistol into the hands of the troopers? Most of us believe that it is not, and never will be. Fancy a charge and a melley in which a troop, armed with automatic pistols, has engaged. At the end of it, in the excitement and confusion, how many of the pistols will be dropped on the lanyard, or shoved into the holster, cocked and all ready to fire a hole through the trooper's thigh? Is there any doubt that some will, in every case?

Of a truth, the automatic pistol will never be of any use in our service except to officers, and even in their hands its advantages are doubtful. Accuracy and quick firing are its only advantages. Accuracy depends more on the hand than the pistol, and in self-defense it is the first shot which counts; and with no automatic pistol yet tried in our service, can the first shot be got off as quickly as it can with a double-action revolver.

As to a larger caliber for our pistols, it is high time that every officer of our service was making himself heard on this subject. So far not a single one with any practical experience who has been heard from, but condemns our small caliber.

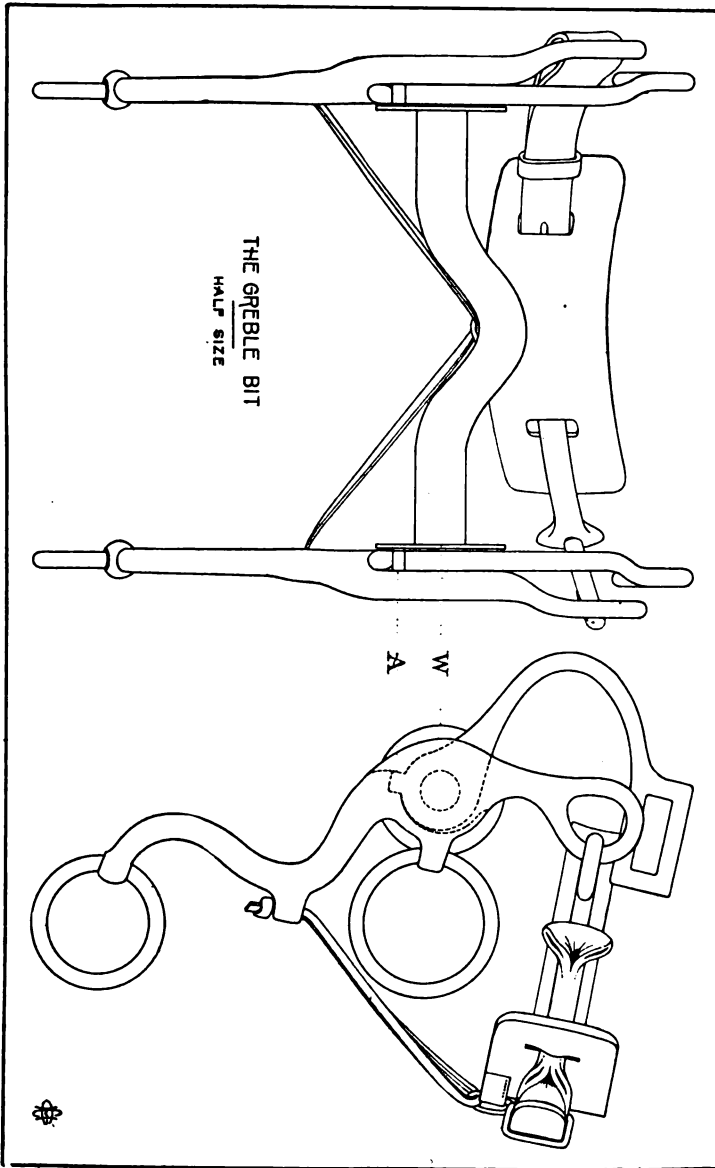
Not one of us, when there is expectation of real danger, feels himself adequately armed if he carries a 38 caliber revolver. Whose fault is it that we are still equipped with this parlor pistol, in the face of all the reports that have been made against it? Let us get rid of it. The pages of the JOURNAL are open to all officers for the expression of their views; and if a whole JOURNAL, or several of them, should have to be given to this single subject, they will have served their purpose well, if they rid us of this faulty weapon. And it is not believed that the Ordnance Department will persist in equipping us with this pistol, if we all raise our voices loud enough against it.

EDITOR.

THE GREBLE BIT.

TURN back to Captain Koehler's concise article on cavalry bits, in the JOURNAL for July, 1903. He cites five serious defects in the issue bit, and introduces the Johnson bit, which most of us have since had an opportunity to test. While the Johnson to a great extent remedies the faults enumerated, it has itself, in the opinion of many officers, defects sufficient to debar it from adoption for field service. The brief comment of an old captain that "it is too — much of a machine," seems to voice the general objection.

The Greble bit, here illustrated, differs from the Johnson and the Whitman in details, but not in principle. The essential difference is that the attachment is inside and not outside of the upper branch; but we have the same separate piece to be attached to the cheek-strap, and designed to prevent poll pressure, and the lug (A) to prevent upsetting. To correct other faults a disk or washer (W) is intended to prevent abrasion of the lips, and a thong is added to retain the curb-strap in the chin-groove; at least, it is assumed that such is its object. A thong similarly placed on the issue bit is frequently used to prevent upsetting, but in the Greble



model the lug (A) prevents this evil since the cheek-piece attachment has a rectangular slot.

Several of these bits have been tested at Fort Riley and the concensus of opinion, gathered unofficially, seems to be :

1st. The cheek-piece attachment obviates the use of the nose-band of the Johnson bridle, but, by comparison, there is a marked loss of rigidity.

2d. The attachment itself is too frail ; it can easily be bent with the fingers, and when it is bent, the parts bind and the principle disappears.

3d. The washer (W) is a necessity in this model to prevent pinching the lips in the scissors of the upper branches ; but in some cases the disk itself has caused injury. Moreover, since the attachment is theoretically stationary, it would seem that the washer should be fastened to the attachment, and not to the mouth-piece.

4th. The upper branch has none of the curvature seen in the Johnson model, and in consequence the curb-strap rises just as much as it does with the issue bit. The thong becomes slack as soon as the lower branch is pulled to the rear.

5th. Accumulation of dirt and rust in inaccessible but vital parts will be even more apt to occur in this model than in the Johnson.

In short, the Johnson is the better bit.

Major Greble has evidently devoted much time and thought to his subject, but the old problem of the practical field bit appears to be still unsolved.

In the remarks following Captain Koehler's article will be found the strongly favorable comments of the Fort Leavenworth officer who, in July, 1902, was testing the Johnson bit. Only yesterday this same officer stated: "The bit has worn out and gone all to pieces, and it was made stronger especially for me." This, after two and a half years of comparatively light service.

The conclusion cannot be avoided that bits of the Johnson and Greble pattern, ideal in theory, are of value in practice only on the gentleman's park horse.

The curb-strap, shown in the figure, stands, of course, on its own merits. It is considered faulty, in that the ends are

not symmetrical. The hook end is fragile; two of these hooks have broken, in one case, permitting a spirited horse to bolt with one of the best horsemen at this school (School of Application for Cavalry and Field Artillery).

G. H. C.

THE SERVICE BIT, CURB-STRAP, AND BRIDLE.

BY CAPTAIN HERMAN A. SIEVERT, NINTH CAVALRY.

THE subject of bridle bits is always an important and interesting topic with the horseman, and the ideas entertained by him in regard to the construction of a bit are as different and varied as the numerous varieties found on the market.

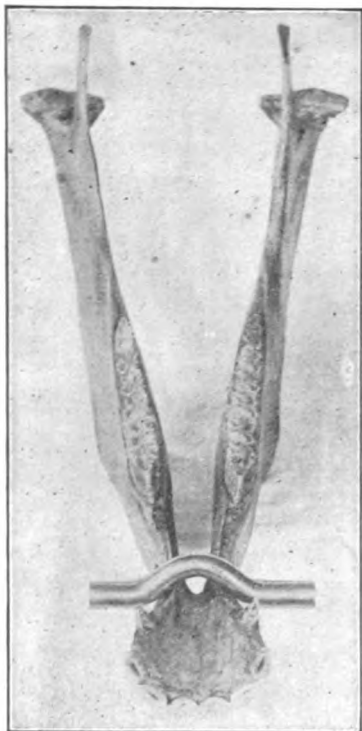
The kind of bit to be used is determined by the opinion of the owner or rider, certainly not by the obedient, adorable horse, who has had perpetrated upon him more instruments of torture than all other animals of his kingdom.

After carefully reading the criticisms invited by the JOURNAL OF THE U. S. CAVALRY ASSOCIATION on bits in general, and especially the present service bit, I endeavored to construct a bit that would overcome many of the objections noted in those criticisms, and I wish to state that I have been greatly assisted in my endeavors by the many valuable suggestions made by officers in reply to the JOURNAL'S invitation. Concerning the mouth-piece, I will first consider the port, its object, width and height.

The object of a port in a stiff mouth-piece is properly to proportion the amount of lever-action between the tongue and the bars, and to allow the tongue to have some blood circulation; a horse is then considered nicely bitted. Just what amount of blood circulation the tongue will have, depends upon its size and texture, and the particular shape and curves of the port.

Cut No. I. gives the mouth-piece of a *service bit* placed on the skeleton bars of a horse sixteen and one half hands, at

seven years of age; the width of the tongue-channel is one and one-fourth inches, the height of the bars is one and eight-tenths inches, these measurements being taken opposite the chin-groove. It will be noticed that the port of the service bit, which is two and one-half inches at the door, and three-



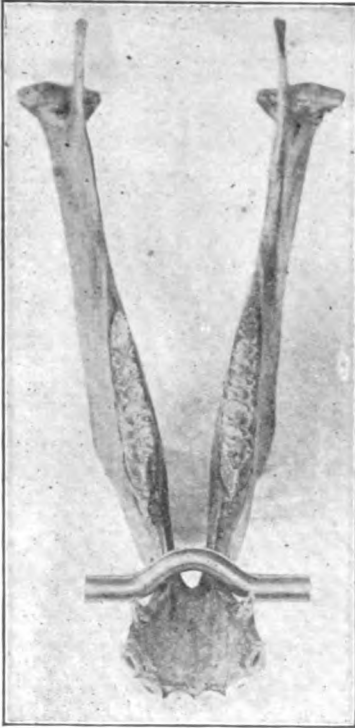
CUT 1.

fourths inches high, falls entirely outside the bars of the jaw of this average mouth; and the straight portions of the mouth-piece do not operate on the bars as we have been taught to believe they should. Authors dealing with the subject of bits, generally agree in regard to the principles of the port and its objects.

Our text-book on hippology, "Horses, Saddles and Bridles," by General Carter, treats of the port in a very thorough manner. The following is quoted from the above named authority, page 142: "The tongue-channel determines how much of the mouth-piece must be allowed for the width of the port of the curb-bit, the remainder being reserved for the action of the bars." Again,

page 152: "It is necessary that the parts of the mouth-piece to act on the tongue and bars respectively should keep their places. This requires that the mouth-piece fit exactly the width of the mouth, and the width of the port be not greater than the width of the tongue-channel. If a mouth-piece with a port be too wide, a slight pull on one rein will suffice to displace it, so that the bar at that side gets either altogether under the port, in which case the pressure is thrown on the tongue, when the corner of the port will, by being pressed into it, cause great pain, and make the action of the bit very

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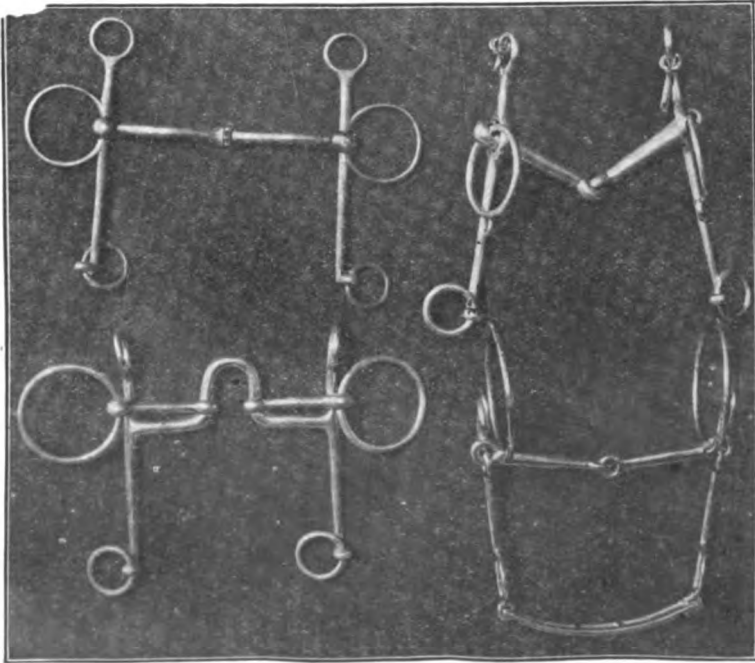
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irregular and unsatisfactory. If the port is wider than the tongue channel, a similar thing occurs; and if narrower it fails to admit the tongue."

One and one-third inches, according to the author, should be the maximum width of the port (this gives no margin, and no matter how correct the mouth-piece is in length, one corner of the port is ready to slip in the tongue-groove at the

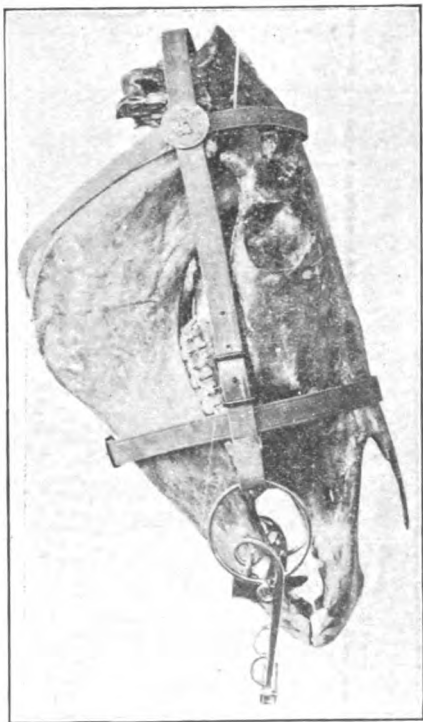


CUT II.

first side pull the bit receives); however, the designers or constructors in the arsenal have followed the principles and objects of the port close enough to give us a service bit with a port two and one-half inches wide.

Let me ask the question, Who is at fault, the board of designers of the service bit, or the authors in their universally accepted deductions as to the objects and necessity for a port in the curb-bit? My opinion is that the service demanded a lever bit, and the designers having nothing to substitute for

the port, continued this relic of barbarism, and have given us a bit in which the port is the most suitable that could be devised; certainly far superior to a port having a width equal to or less than the lingual canal. The port of the service bit as shown in Cut No. I. works well down on the



CUT III.

sides of the bars of the lower jaw, and the corners of the port being well rounded, the action is much less objectionable than with a port having the same width as the tongue-channel; in which case the corners could not be very much rounded.

I have endeavored to show that the port is a bad element in a bit, no matter what its shape, and for the sake of the horse and pony I should like to see a curb-bit introduced into the service, which will have snaffle sections for its mouth-piece, and in which the curb and snaffle actions can be used independently of each other, or in conjunction with

each other; thus giving a bit similar but superior to the curb and bridoon.

Cuts II. and III. are the only bits on the market that approximate the above description.

WIDTH AND HEIGHT OF PORT.

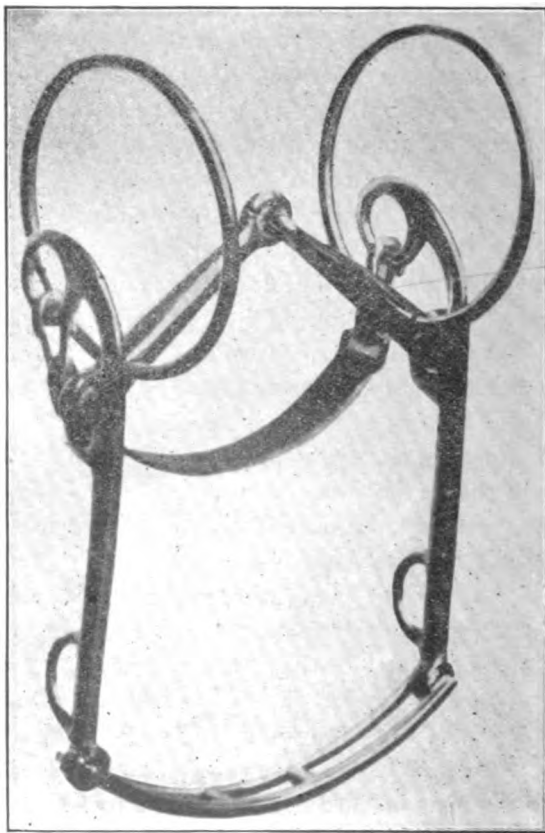
In considering the width of the port, it is, of course, necessary to know the width of the channel the port is to bridge; the average width of the channel for the tongue is found to be about one and one-fourth inches.

It may be said that the height of the port will depend upon how much tongue it is to receive and work upon; as the average width of the lingual canal is one and one-fourth inches, the bottom of the port should be a little narrower, say one inch, or better, seven-eighths of an inch. This will give three eighths of an inch play, and will help to prevent (if possible) the corners of the port from being pulled into the channel, and also from bruising the gums on the outside of the bars. A port seven eighths of an inch wide at the door, if not too small for the tongue to enter comfortably, and cause the horse to draw back his tongue in a tiresome position, will require too much height. Any port that would meet one of these requisites in shape, would be at fault in every other particular, and as a matter of fact it (the port) is entirely inconsistent with good biting.

Cut III. has the broken or hinged mouth-piece, generally known as a snaffle mouth piece, placed on the same skeleton bars; these snaffle sections are shown to make with each other an angle of about seventy degrees, which I have considered to be a safe angle in consideration of the pinching action on the bars of the mouth. This angle, however, can be made greater or smaller, by increasing or diminishing the openings in the ears of the branches. It is evident that the arch the mouth-piece sections make with each other increases in height with the amount of pressure or power applied to the reins; also, that this mouth-piece accommodates itself to the different shaped mouths, and to the volume and texture of tongue of the individual horse. Before concluding my remarks on the mouth-piece itself, I will add, that I appreciate the mildness of the snaffle section in training the young horse and its tendency to preserve a normal mouth in the trained and older animal; but I am convinced that the better education of the horse is accomplished by the use of the lever action in a bit, usually completed by the assistance of some form of curb-strap.

CURB ACTION SEPARATELY CONSIDERED.

In the present service bit the length of the upper and lower sections of the branches being generally conceded to be of proper proportions, the shape of the branches should be determined by just what part of the mouth the lever-



CUT IV.

action of the bit should be applied to; the accepted place for this action is in the chin groove by the curb apparatus, and upon the bars of the lower jaw, opposite the chin groove, by the mouth-piece.

The shape of the branches of the present curb-bit is faulty for two reasons: First, the curb apparatus moves up

the corners of the horse's mouth. Both of these faults would be obviated by changing the shape of the upper portion of the branches in the service bit.

Cut IV. shows branches with proportions identical with those of the service bit, but with the upper parts of the



CUT V.

branches bent slightly rearwardly and down. It will be seen that it is absolutely impossible to pinch the corners of the mouth with this shaped branch, and that the curb strap has not the tendency to leave the chin groove.

THE CURB STRAP.

The curb strap should be light, strong, of a suitable length and texture, should conform to the shape of the chin groove, and should not stretch or shrink.

Cuts IV. and V. show such a curb strap. It is made of steel tape, having the ends bent back upon itself, and riveted to form loops; the rivets passing through the ends of a piece of stuffed leather, to serve as a cushion. It costs about fifteen cents, which includes a double detachable snap. These snaps can be made of different lengths, thus making the curb-strap adjustable. These various sized snaps are to be kept by troop commanders, and when the proper length curb strap is determined by an officer for a trooper's horse, it cannot be changed in length to suit the whim of the rider.

BRIDLES.

Cut V. shows a bridle having but two straps, five buckles, two keepers, and not a stitch of sewing in it. This bridle can be perfectly adjusted to suit the largest horse or the smallest pony.

The service bridle has several objectionable features that have occurred to me under varying circumstances; and while it does not require a vast amount of energy to criticise and find fault, yet this is usually overlooked, when one is candid and sincere enough not only to suggest something better, but also to construct and test a model that will eliminate the objectionable features in the article that he criticises, without introducing other or more objectionable features.

To start with, the brow-band of the service bridle is not adjustable in its length. It may, however, be moved up and down on the crown-piece; but there is no attachment to hold it in its proper place, and a horse with a small head will have the buckle of the cheek strap crowding the brow-band up against the base of the ear.

The bridle is decidedly weak in one place, namely, where the ends of the crown-piece (just below the rosettes) buckle into the cheek straps. The bridle is also faulty in that it has no considerable degree of adjustability; for instance, in attaching the watering bit to the present bridle on a horse with a small or medium head, the mouth-piece of the bit cannot be taken up far enough in the animal's mouth.

Cut V. shows a bridle that remedies these defects. The brow-band and throat-latch are one continuous strap, held by a flat buckle hidden by the rosette; and the brow-band can be readily lengthened, raised or lowered, to suit the particular shape of the animal's head.

The crown piece and cheek straps are one continuous strap of the same width (one inch) throughout its length; these two straps and five buckles form the bridle. It will be noticed that the bridle has not a stitch in it to weaken its structure, and while it has no weak link (so to speak) it is pleasing in appearance. The crown-piece of the service bridle being split at both ends from the rosette down, the rear portion forming part of the throat-latch, and the front portion part of the cheek-pieces, gives the bridle its weak link.

A strap is run between a small, strong metal keeper and the buckle of the cheek-piece, making the whole an excellent halter-bridle; and each trooper, with the assistance of a buckle and a strap, is at once his own saddler, as far as his bridle is concerned.

The third rein shown in Cut V. is detached from the bit and snapped into a ring in the halter-strap for the purpose of a halter-shank when such is necessary.

The following are some of the objects and principles of the bit shown in Cut IV :

Why Does the Jointed Mouth-piece Give the Desired and Proper Fulcrum in Operating a Lever-action Bit?

The desired fulcrum, for the reason that the mouth-piece accommodates itself to suit the volume and texture of the tongue, and the size of the bars for each individual mouth.

The proper fulcrum, for the reason that it positively assures the preponderance of pain on the bars of the lower jaw, and a minimum of pain in the chin groove. This is accomplished by the pinching effect of the snaffle sections in operating the lever-action, in addition to the pressure on the bars. Thus the animal will surrender to the pain, and

the head will follow the rider's hand ; while, if a considerable amount of pain is produced by the curb strap, the head will naturally be pushed forward to avoid the pain, bolting, and a general misunderstanding between rider and horse will follow.

Why Should the Mouth-piece Have a Universal Joint Connection With its Branches?

This prevents the mouth-piece from being turned in the animal's mouth, eliminating possible injury to the bars ; and it certainly gives more comfort to the animal.

It keeps the part arched over the tongue at all times, thus preventing it from pressing into that member. It prevents the animal from seizing a branch between his teeth. When the curb structure is not being operated, it swings loosely, both forward and laterally on its pivoted connection, from the perpendicular, and it is about as difficult for a horse to catch a branch as it is for a boy to grasp with his mouth an apple hung on a long string from the ceiling.

Why Should the Branches be Curved Down and Rearwardly?

This prevents the corners of the mouth from being pinched between curb-strap and mouth-piece.

It keeps the chin-strap in the chin-groove, and the pressure of the mouth-piece on that part of the bars opposite the chin-groove.

The ball and socket connection and the universal joint connection, as shown in Cut V., are used for the reason that they can be readily constructed to limit the angle made by the mouth-piece sections. From actual tests I have found a minimum of sixty-five or seventy degrees for the average size mouth to be a safe angle, and one that will not injure the bars by excessive pinching. The above described connections also prevent the upper portion of the branches from coming together too closely in operating the snaffle action.

The first named connection, that having the "universal joint," from its construction, prevents the horse from throwing the bit over.

Why Are the Rings Used to Connect the Cheek Pieces of the Bridle?

- 1st To protect the sides of the animal's face from being rubbed by the branches.
- 2d. To protect the horse's cheeks; the ring gives a construction that does not interfere with the curb action.
- 3d. To prevent a pull on the top of the head, and, also, prevent displacement of the mouth-piece when operating either the curb or snaffle actions.
- 4th. So that a running rein can be used in breaking a remount, or for martingale attachment, if desired.

Why Is the Yoke Constructed With a Central Loop?

To give a third rein attachment for operating the curb action by the trooper, and the off horse by the mounted artilleryman. It is expected that with this bridle the trooper will habitually ride on the snaffle, thus preserving a normal mouth even with a heavy-handed rider.

 THE TRAINING OF CAVALRY HORSES.*

BY EDWARD L. ANDERSON, AUTHOR OF "MODERN HORSEMANSHIP."

GENERAL:—I accepted your invitation to address the officers of your command upon the subject of the "Training of Horses," with much pleasure; in the first place, because it was a high honor to appear before such an audience, and in the second place, because I had for many years taken a lively interest in our mounted service and hoped that good would follow such a scrutiny of the subject in hand. For, instead of delivering a lecture, I had proposed to myself, with your permission, to make a statement of the principles of the method to be recommended, and invite criticism and discussion from the gentlemen present. In

* Extracts from a letter to the commandant of the Infantry and Cavalry School and Staff College.

such a course any errors that existed might be made apparent, and obscure points could be made clear.

Should you receive this letter, it will be because circumstances have prevented me from keeping my engagement during the time appointed, and I can only express my deep regret that such is the case.

I am sending you a summary of the points I had hoped to offer for consideration, and if you can make any use of this communication I shall be gratified.

Above all other horsemen the trooper should have the immediate, exact and unlimited control over the animal he rides, and every army should adopt some system which accomplishes this in the simplest manner. Some arrangement of Baucher's Method best answers these requirements, but Baucher's writings are too obscure for general use. Horses were trained, and sometimes well trained, before Baucher's day, but all such work was more or less tentative, and it remained for that master to formulate and explain all that was of value in the art, and to give undeviating rules that applied to every case.

That all modern methods of training of any value owe their existence to Baucher (a fact that is usually disputed by those authorities who desire to lay claim to originality) may be seen by comparing any work on the subject which has appeared since 1845 with those of an earlier date.

Stripped of its unnecessary and confusing refinements, Baucher's Method may be expressed in two brief paragraphs:

I.

The cultivation in the horse of those muscular actions that follow the applications of the hand and heel, until obedience to their demands becomes instinctive. The suppling consequent upon this work, annulling the active (or willful) and the passive (or physical) resistances and rigidities in all parts of the animal.

II.

Collecting the weights and forces of the extremities (the forehand and the croup) to a point of union and balance under the rider, who disposes this center of gravity as the occasion requires, so that the animal moves in easy, cadenced and controlled actions, forward, to the rear, or to either side.

The results indicated in these two principles must always have been produced to a greater or lesser extent in every horse that had been made easy, safe and pleasant to ride; but horsemen did not understand the matter clearly, until Baucher's scientific explanation of the phenomenon. That is, previously to Baucher, training was an experiment in every case; afterwards it was a method.

Furthermore, Baucher explained that a great part of the education of the horse could be accomplished by the dismounted man in about one tenth of the time that would be required by the mounted man, by reason of the ability of the trainer to demand more readily a sure obedience from the animal so confined. Indeed, except for the few lessons which would be required to transfer the effects of the whip to the rider's heels, a horse might be thoroughly trained without ever having been mounted.

A satisfactory method having been selected, it should be of general application throughout the army, for that would secure a uniform and certain mode in place of irregular and questionable ways of handling horses. In spite of short enlistments, unsuitable bridles, and irregular instructions in horsemanship, the cavalry of the United States Army compares favorably with the mounted men of any country; but this is due to the zeal and abilities of its officers, and two, at least, of the three hindrances might readily be obviated to the advantage of the service. At present every troop commander teaches riding and training according to his own ideas; so that it may happen that no two units of a regiment would have, when mounted, the same uniformity, mobility, or effective force, every variety of seat and of handling the horse being possible. A settled method might be introduced without serious disturbance of existing conditions by the ap-

pointment to the Military Academy of an instructor familiar with the desired method, and by sending the graduating cadets who are to be commissioned in the mounted arms to one of the Service Colleges for one year's work in the care and training of horses.

The nearer we keep to the so-called thoroughbred and yet improve on it in springiness of action and in nimbleness (for by reason of its long stride the thoroughbred has some defects in its movements) the better horse shall we have for the cavalry, because the stamina and courage that will make even a dying effort, may give the great result that has been looked forward to by years of preparation. In the Napoleonic wars, the coarse animals ridden by the heavy cavalry sometimes became "dead-beat" in the charge, and could only be brought against the enemy in a walk; by which the effect was lost. It is questionable whether the time ever comes that a few strides in the gallop cannot be asked from a well-bred horse that is able to stand on its legs.

Whatever may have been its previous handling, every horse that is intended for cavalry service should be put through a like course of training, the length of time required for any stage of its education depending upon circumstances.

In America we do not make enough use of the *cavesson*, a head collar with a metal nose-band, by means of which the man has great control over the horse without necessarily inflicting pain on the animal. When the horse circles about the man at the end of the longe-line, and is brought to a halt at the trainer's demands, and made to change direction, and to do other things required of it, the animal is not only given a good form of exercise, but it is suppled throughout, and an amount of discipline is established that would surprise one who had never made use of this admirable instrument.

The fault in Baucher's writings, which renders them almost or quite useless to those who do not recognize it, is that he apparently intends that the training of a horse should begin with the bending lessons in the double-bridle. Everyone who has proceeded in such a manner must have invited failure, for the horse would always be "behind the hand,"

that is, the rider would find no tension upon the reins by which to direct the movements of the horse. *Riding is the production of impulses from the croup which are controlled and directed by the hand.* The hand must always find some slight opposition to the reins, or it will have no control over the horse. When a horse determines to rear, to shy or to commit any form of mutiny or mischief, it almost invariably "drops the bit" and gets behind the hand just before it endeavors to escape control.

When the horse is first mounted, it should be ridden in the snaffle until it will go forward under a steady but slight tension upon the reins, and has been taught to obey the heel indications, and to be fairly obedient to the bridle.

Then the animal should be put into the double-bridle and its education completed by carefully conducted lessons. It should be observed that no horse can be properly trained or ridden in the single-curb bridle, *and it is a matter of astonishment that this inadequate apparatus should be retained in our service.* In every European army the curb-and-snaffle bridle is employed, and there are many reasons in its favor beyond the fact that both bits are required in properly training a horse.

Among many things that may be said in behalf of the double-bridle may be mentioned, its advantage in preventing the horse from escaping control by bringing the chin against the chest, as it may do in the single-curb-bridle, and the relief that would come to the horse upon the route march by the use of the snaffle, many horses being harassed to the point of fatigue, or even injured, by the careless use of the severe mouth-piece.

In the method I have ventured to recommend, nothing is left to the volition of the animal, and no dependence placed upon its docility or good temper. The animal obeys because it acts instinctively and does not dream of disobedience. By the suppling exercises, and by controlling the positions of the weights and forces of the extremities, the animal moves in smooth, even and cadenced actions. It can be brought to a halt in the gallop by means of the spurs, so

that there will be no jar or disorder. It may be made to change lead in the gallop in the beat of the pace, wheel in place from high speed, and perform any movement of which it is capable, with precision and celerity. Any man of ordinary intelligence should learn the whole system in a few short lessons, and be able to apply it, after such practice as would make him a fair rider. There is nothing mysterious or difficult in any of the modern methods, and the results are marvelous.



THREE CONTRIVANCES FOR USE IN HORSE TRAINING.

TRANSLATED FROM "REVUE DE CAVALERIE,"
BY CAPTAIN FRANCIS C. MARSHALL, FIFTEENTH CAVALRY.

I. CAPTAIN CHERVET'S LONGE.

THE adjustment of the longe on the bit, and the position that it takes with respect to the crest, are indicated in Figure 1. It is seen at once from the cut, that the adjustment of the longe admits of all possible combinations of arrangement at the bits (according as the longe takes one or both rings of the bridoon, one ring of bridoon and one of bridle, etc.), and that these same bit combinations are again available for the work to the right hand.

It is seen besides that the pressure on the crest is divided, and is extended on the two points A and B. The point B may be shifted to any position between the poll and the withers. In ordinary practice the relaxation of the muscles, the suppleness of the gaits, the equilibrium of the movements, are the criterions that serve as guides to determine the place of this point.

The pressure at the point A results in part from the turn of the longe under the throat latch, and experience seems to show that this arrangement conceived by Captain Chervet is advantageous in the majority of cases.

Figure 1 does not show all the contrivances adapted to facilitate the sliding of the longe both in the rings of the

bits and in the throat latch (that might itself carry a ring for the passage of the longe). A rope of ordinary hemp, about one centimeter in diameter, is suitable in most cases for the longe. The use of a rubber covering might be advantageous for that part of the longe that passes over the crest. The arrangement of details serving to make the instrument vary infinitely, each one should choose the arrangement that suits the case in hand.

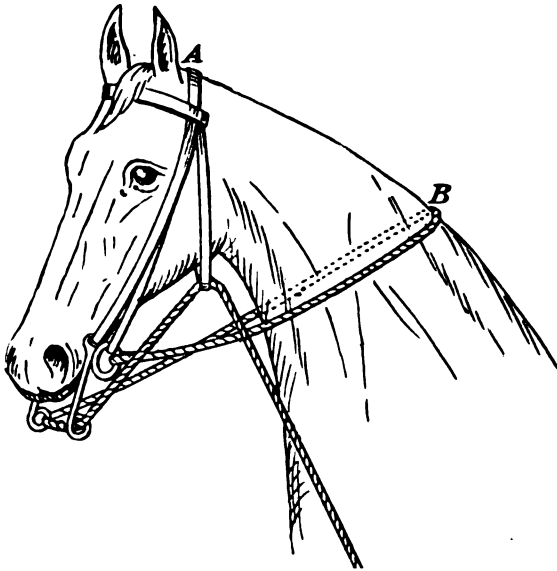


FIG. 1.

The Longe is placed so as to work in circle to the left.

The longe so adapted is not a means of coercion, as we are going to see, but an extremely efficacious instrument for suppling.*

The horse, at first not mounted, is put on circle by means of this single instrument, which, without producing any brutal effect, possesses, by reason of its power, a moral ac-

*It is to be noticed that the method of reining described here differs essentially from the regular methods, that have been so often objected to, not without reason, as presenting very grave defects. It differs also materially from all methods of reining that react upon the body of the horse, and not upon the crest.

tion manifesting itself by the very rapid submission of the horse. The exhibition of force and of spirits generally provokes no disorder. The horse puts himself very quickly on the bit, and the tension of the longe, leading only to muscular relaxation, creates no tendency to slackening of gait. The exercise on the longe gives to all horses an acquaintance with the bit at all gaits, and at the same time a marked élan.

The work on the circle is of itself excellent gymnastics, but it becomes here particularly efficacious because the horse works "place," relaxed, and with an impulse that the instructor can maintain, by means of the long whip, to the highest degree, without causing confusion.

The elevation and the curvature of the crest, its extension, the position of the head, the relaxation of the muscles, are regulated at the will of the instructor. The changes in the direction of the force applied, due to the arrangement of the longe, remove all danger of bruising the crest, whose base quickly acquires the firmness necessary in the course of training. The arching of the neck, and the lowering of the crest, are prevented by the choice of position for the point B.

Relaxation and lightness, especially, are obtained with great rapidity. If one mounts a horse, having first worked him a quarter of an hour on the longe, he is astonished to observe a noticeable increase in the suppleness of the jaw, ease of reaction, and tractability.

Exercise on the longe with this instrument constitutes a very interesting study for any one interested in the horse. All the movements of the animal betray suppleness and equilibrium. The horse with muscles relaxed, expends his forces without useless violence, and he acquires in a few days a lightness of attitude and of action that it is a pleasure to note. However brief the work on the longe may have been, the horse receives in some sort the imprint of its effects; and the results, at least in part, are permanently acquired. All the work on the longe may be executed with an assistant mounted on the horse.

II. CAPTAIN DE COLBERT'S REIN.

Captain de Colbert has contrived an arrangement of the rein, that constitutes the most simple instrument that can be put into service in the troop. (Fig 2.)

This arrangement consists, after having placed the middle of the rein on the crest, in making the free ends pass through the rings of the bits, and uniting them in the hands of the rider. The point of support *B* of the middle of the rein varies according to the attitude of the horse, and the object to be obtained; the rider can change it easily.

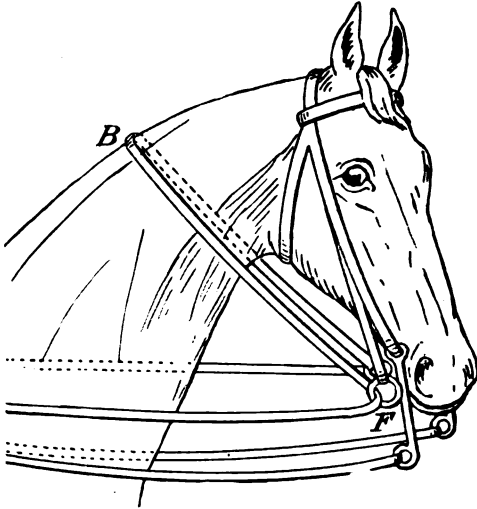


FIG. 2.

If the horse goes from the hand, the rein is placed towards the middle of the crest; if the horse arches his neck, it is placed, on the contrary, towards the poll, and becomes,

then, a sort of elevating bridoon. In the ordinary case the rein approaches this latter position.

The arrangement of reins thus effected is very powerful; the rider places the head of his horse at his will. The tension of the reins, instead of maddening the horse that gains on the hand, quiets him gradually. Finally, the slipping of the reins in the rings, and in the hands, permits the extension of the crest, of which the rider rapidly takes up the play.

Experiments have been tried upon a large number of horses. In the different defenses that the horse opposes to training (rearing, bucking, whirling about, dancing, kicking, being excited in the rank, etc.), success has always responded to the attempt.

During the period 1900 to 1902 the results obtained were, moreover, submitted to a number of competent persons. One might, however, ask if this powerful instrument, put into the hands of inexperienced riders, would not offer objections. Experience has shown that awkward riders succeed rapidly enough in graduating their actions, and that they make use of this method of reining without the horse's losing anything of his élan.

This system of reining has been tried successfully by many officers and breeders to whom Captain de Colbert has recommended it. It admits of many variations; among those the bridle of Lieutenant Lebaume of the cavalry deserves special mention; he gives joint responsibility to the cheek piece and the rein, and establishes very rationally pressure on the poll. (Fig. 3.)

It is to be remarked, in addition, that the rein of support, like the longe, lends itself to all combinations of biting.

Officers have devised, since the experiments of Captains Chervet and De Colbert, quite a number of apparatus (bridles, longes, etc.); they have thus been able, as a consequence of their personal researches, to realize often enough happy dispositions with their several arrangements. Others have experimented, generally with success, with the longe and rein of support, in the training of their own horses or those that were entrusted to them.

Finally the methods described above are applied in some regiments to the training of young horses.

All these efforts seem to merit encouragement.

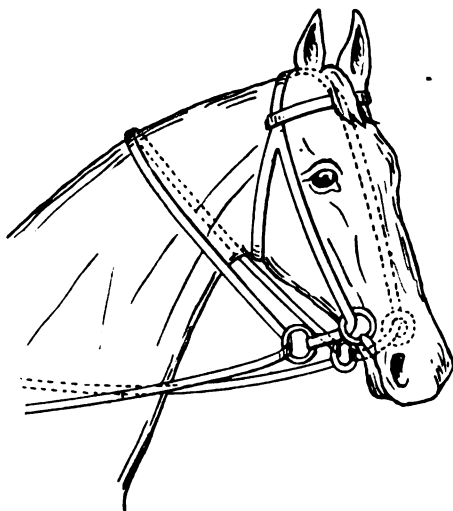


FIG. 3.

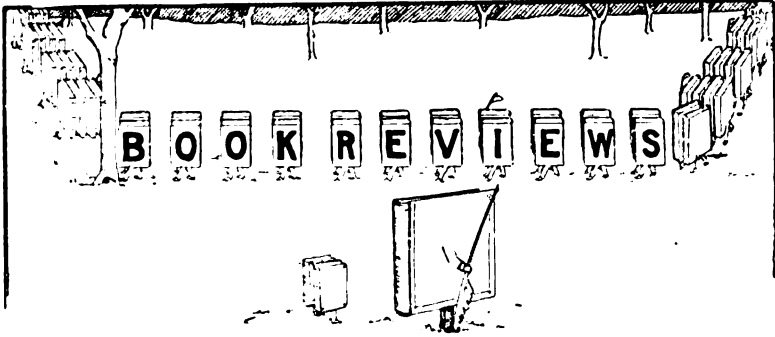
CONCLUSION.

Captains Chervet and De Colbert have trained by the processes we have just indicated in outline quite a number of horses that form, from the point of view of the different objects of training, a very complete series; and it seems superfluous to remark that the greatest part of the experiments have been made upon horses destined for the army and upon hunters.

In summing up, it seems, indeed, that the methods praised by Captains Chervet and De Colbert have opened up a fertile field in the domain of equitation.

The diversity of methods of training undertaken by these officers has always put in evidence: 1st. Sureness of progress; 2d. Rapidity of results; 3d. The quality of the gaits and the comfort that the rider gets in consequence.

[NOTE.—I have used the apparatus described in the above articles on several horses; the longe but little, the rein considerably. I can see that there is much merit in both, but my opportunities have been limited, and I am not satisfied that as much merit attaches to them as is claimed. The rein was tried, in the crudest possible fashion, on a horse in Troop C, Fifteenth Cavalry. He was a fine big horse, but very hard to hold—so hard that his rider, a specially selected strong man and a careful rider, never could draw his saber; he needed both hands to keep the horse in ranks. With a plain snaffle he was completely unmanageable, both in and out of ranks. Captain de Colbert's rein was put on him, applied to a watering bridle, and a recruit rode him easily at drill with it. It was tried with equal success on other horses with ruined mouths. It is hardly fair to the bridle to test it on green horses, so many things other than the biting enter into their education. The little I have tested the idea set forth in the above articles, convinces me that it has a positive value, and that it deserves a thorough test.—TRANSLATOR.]



[All books reviewed may be purchased from the Secretary, Staff College, Fort Leavenworth, generally at reduced price.]

Staff Rides.* In this little book of fifty-five pages the author undertakes to explain what "staff rides" are, which, it appears, have been lately introduced into the scheme of instruction of British officers. He also describes how such "rides" are conducted. They may not be rides at all, but may be done on foot; the author thinks bicycles are the best means of transportation to use in connection with staff rides.

A "staff ride" is simply a tactical or strategical exercise on the actual ground, in which the troops on both sides, and all the conditions, are imaginary; and the officers engaged in the exercise occupy hypothetical positions of duty or command. Various terms have been invented for these exercises, none of which define them. The term "staff ride" does not even suggest to one unacquainted with it what it means. It is, however, not quite so unmeaning as the term we have used in our service for similar exercises; namely, "terrain ride;" which being interpreted simply means "ground ride."

*"STAFF RIDES." By Captain A. H. Marindin, the Black Watch. Hugh Rees, Ltd., London, Publishers.

This little book does what it undertakes to do, and besides, has a chapter on "Reconnaissance Reports" which contains many useful suggestions for very young officers, and some by which older ones may profit.

"Adjutant's Manual."* This is a handy little volume which has recently issued from the press of John Wiley & Sons. As its name suggests, it is a manual for use of post adjutants, defining their duties, and stating clearly how these duties should be performed. A large amount of information is contained in a small space, and while the book would be very useful and handy on any adjutant's desk, it is especially valuable for the use of State troops and volunteers, and every battalion and regimental adjutant of the National Guard should have a copy for daily consultation.

M. F. D.

Syllabus of Davis's International Law.† This handy little book is intended as a time-saver. It contains all the definitions of the original work and the gist of nearly all the argument. No original matter appears, and, as the author says, it is not intended to replace the original subject, but to be useful to those who are already familiar with it, in cramming for examinations.

It exhibits the bony skeleton of Davis's International Law. By itself it can hardly be of any use, unless as an index to further study. The small size of the book, and the amount of substance it contains, suggest the value of a handbook of information containing an epitome of all subjects studied by officers, to be used in the field, when reduction of baggage makes the abandonment of an officer's library indispensable.

C. C.

*"ADJUTANT'S MANUAL." By Courtland Nixon, Q. M. Dept., U. S. A. John Wiley & Sons, New York, Publishers.

†"SYLLABUS OF INTERNATIONAL LAW." By Lieutenant C. A. Seoane, Third Cavalry. Franklin Hudson Publishing Co., Kansas City, Publishers.

**An Army
and Navy
Dictionary.***

This is a convenient little compilation for the layman to own who is interested in military and naval affairs, and reads military and naval literature; and for the landsman it contains many technical and slang sailor words with which he may not be acquainted. For the military student, however, there is scarcely an item of information in it which he must not already know, if he has got beyond the primer of his professional studies.

From its omissions and inaccuracies, as well as from some of the words included, one must judge that the dictionary has been hastily compiled to meet an immediate demand. Among such, we note "General Service and Staff College," an institution which no longer exists as defined, but by War Department orders has given place to the "Infantry and Cavalry School and Staff College" at Fort Leavenworth. "Naval Institute" is defined, but the precisely analogous institutions pertaining to the land forces are not honored; namely, the "Military Service Institution," the "Cavalry Association" and the "Infantry Association." The term "staff-ride" is not included, and to the book's credit the French word "terrain" is also excluded.

"Aparejo" is defined as "a kind of Mexican saddle fastened on a pack-animal by means of a long rope, used extensively in army pack-trains." The aparejo is not fastened on by a rope, but is strapped on, and the long rope is used to fasten the pack on to the aparejo by forming the "diamond hitch." The "diamond hitch" is not defined, nor are any of the details of the pack outfit.

"Boot-lick" is deemed worthy of definition as a military or naval term, while such familiar soldier words as "striker," "jaw-bone," "how!" and "hike" are omitted.

"AN ARMY AND NAVY DICTIONARY." Compiled by Major John P. Wisser, U. S. Army, and H. C. Gauss, Esq., of the Navy Dept. L. R. Hamersly Co., New York, Publishers.

The Auxiliary Officer's Handbook.* "The Auxiliary Officer's Handbook of General Information, and Company Officer's Lecture Book," is a small volume of 230 pages into which the author, Captain R. F. Legge, of the British Army (militia), has put a vast amount of information that will be found useful to an officer of the English Auxiliary Forces, and much that is both interesting and instructive to American Volunteers or Regulars. The little volume contains chapters on all subjects studied by our young officers during their three years' course in the Garrison School, and, in addition, some things that we take in the Infantry and Cavalry School.

His opening chapter on "Discipline," in which he dwells in sincere language on the strict discipline in all armies, is well worth reading. He says:

"In the order of its importance, I have placed the chapter on "Discipline" first in the book. * * * A fighting force is either disciplined or undisciplined, there can be no in-between, and soldiering, when no discipline exists, is as useless as it is farcical. It is not speaking too strongly to assert that discipline in the soldier is the keystone of all success in war."

Continuing, under "Fire Discipline," he says:

"Fire discipline trains a man's fighting intelligence to such a degree that, though his mind be temporarily paralyzed by danger and superior control no longer exists, his instinct is to fight on alone, and to do the right thing under the circumstances. It comes into play only when within decisive range of the enemy."

The chapter (III.) on "Maneuvers" is short and to the point, but valuable to us all:

"The result of a field maneuver should not be the main thing looked for; it makes little difference who gets the best of it, and the whole point is lost if that is made the important lesson. Ninety-nine times out of a hundred the result in actual warfare would be different."

*"THE AUXILIARY OFFICER'S HANDBOOK." By Captain R. F. Legge, British Army (Militia). Gale & Polden, Aldershot, Publishers.

In this he appears not to agree with so many umpires at our maneuvers, who are prone to rule half a company of the infantry or a whole troop of cavalry off the field as "dead," because, forsooth, they have dared to come within fair range of either the infantry or artillery fire of their opponents, or who rule a battery of artillery out of action as "captured" because a troop of cavalry charges it. He apparently agrees with many of us, that these umpires would do well to read military history, or better still, follow the making of it in Manchuria.

Then follows chapters on "Marching," "The Attack," "The Defense," "Skirmishing," "Outposts," "Advance Guards," "Rear Guards," Reconnoitering," "Scouting," and "The Importance of Judging Distance," etc., in which the instruction is much the same as laid down in Wagner, except that in Captain Legge's book all that is really necessary for a Volunteer officer to know is contained in about fifty pages.

There are several short chapters on what we call "Small Arms Firing," but which he calls "Musketry," "Field Firing," "Word of Command" and "Miniature Practice With the Service Rifle." Our new Firing Regulations cover this subject more fully and better.

Then comes an extremely valuable little chapter on "Framing Orders," followed by one on "Military Law," which is too brief and not applicable to our service.

"Field Sketching and Map Making" contains probably enough for a Volunteer officer to know for all ordinary purposes, but does not go into the subject deeply enough to satisfy the requirements of Regular officers. His chapter on "First Aid" is likewise too brief except as he says, for "auxiliary forces;" but if every volunteer knows and can practice all the simple remedies given by Captain Legge in his short chapter of five pages, he will be able to get along until more expert medical aid arrives.

The chapter on "Etiquette," although mostly applicable to the British service and abounding in terms and phrases not familiar to us, contains several paragraphs that many of our Regular officers would do well to follow :

Salutes.—The salute of a private soldier or noncommissioned officer should be scrupulously and courteously acknowledged, and officers should bear in mind that there is only one method of saluting or returning a salute, and that is the way laid down in the drill book. The salute with two fingers raised to the cap, or to answer a salute by raising the cane to the cap is the essence of slackness and resembles the manner adopted by grooms and cabmen.

Funerals Passing.—Officers in uniform should always salute a coffin, be it a civilian or military funeral, standing to attention until the hearse has passed.

“A lieutenant or second lieutenant is never addressed as such, either on parade or socially, nor is his rank used in writing to him, except on official letters.”

There are also some instructive paragraphs on the etiquette of calling on garrison and regimental messes, on regiments, returning same, etc., which are applicable to officers in all armies, and with the customs of which many officers are not familiar.

The little book is full of meat valuable for the enthusiastic officer, and there is much in it that will assist one in preparing short lectures; unlike so many writers on military subjects, Captain Legge does not repeat. When he says a thing once he considers that sufficient, and seems satisfied to close his volume with 228 pages.

The majority of our writers become so verbose in their attempts to produce a three dollar volume instead of a dollar one, that the book loses much of its usefulness by having the knowledge contained in it so smothered in words, and repeated so many times in as many different wordings, that the real ideas of the writer cannot be determined, and a clear and concise definition cannot be found in the book.

Although the sequence of the chapters does not appear to me to be logical, “Camping” being thrown in between “Outfit Allowance for Volunteer Officers” and “Test for Meat, Bread and Water” in Part III., instead of being at the beginning or end of Part I., yet the milk of the cocoanut is all there, and it is to be commended for clearness, brevity and conciseness. The little book is worthy of a place in every officer’s library:

M. F. D.

Indian Fights and Fighters.* This volume is the fourth one of the "American Fights and Fighters" series written by Doctor Brady. There are many intensely dramatic incidents incorporated, the most important being the Fort Phil Kearney and the Custer massacres; the "wagon-box" fight on Piney Island between Major Powell's detachment of thirty-two men and Red Cloud's band of 3,000 warriors; and last and best, George A. Forsyth's fight between his "Rough Riders" and Roman Nose's band on the Arickaree fork of the Republican River. The book abounds with deeds that "ring like a trumpet-call to American manhood."

There are many illustrations and a dozen maps and plans. The book, however, lacks a general map of the Northwest country, which makes it quite impossible for the uninitiated reader to follow clearly the events recorded.

The author objects to the application of the term "massacre" to the Phil Kearney and Custer affairs, and his point is well taken. Nevertheless, right or wrong, that is the name by which they are known, and we doubt if the public can be made to change the misnomer.

Custer's story takes up about one-half the volume. The author concludes that Custer disobeyed his orders in pursuing and attacking the Indians as he did. He has spared no pains to get at the facts, and he gives in an appendix original contributions to the subject from various pens. It is an old, old story, and has been threshed out pretty fully by the representatives of both sides. While all must admit the industry of the author, and his fair, unbiased attempt to get at the truth, yet all will not agree with him in his limitations of the interpretation of the celebrated Terry-Custer order.

It seems inexplicable that General Miles should make the statement in his book that "we have positive evidence in the form of an affidavit of the last witness who heard the two officers in conversation together on the night before their commands separated, and it is conclusive on the point at issue" (disobedience of orders), and yet that he should fail not only to produce the affidavit, but even to name the

* "INDIAN FIGHTS AND FIGHTERS." By Cyrus Townsend Brady, LL. D. McClure, Phillips & Co., New York, Publishers.

affiant. Such an affidavit if made by a trustworthy person would absolutely clear Custer's good name of any stigma whatsoever, and if the affidavit is at present in existence it should be produced, no matter whom else it might injure.

The author is doing a great service for the army by thus recording its deeds, and we wish him the same success in his forthcoming books that he has attained in this stirring volume.

All officers of the army who have any original information concerning the Indian campaigns in the Northwest or Southwest, conducted since 1876, should send it to Doctor Brady, so as to enable him to reach a just conclusion and to be correct historically. This is a duty that officers owe to their regiment or corps. and to the army, and we hope that the author's appeal for such information has not been made in vain.

P. E. T.

The Development of Tactics.* The second edition of this work, enlarged and revised by its author, Dr. T. Miller McGuire, Barrister at Law, Inner Temple, London, has recently reached our table.

The first edition appeared March 1, 1904, and was compiled at very short notice, to be used as a text book by candidates for the British Army. One of the subjects in their examination is "History and Development of Tactics," and, as the War Office has never authorized any text book on the subject, Dr. McGuire prepared the volume largely from his own notes, in order that candidates might have something definite on which to commence their studies.

The book scarcely appeared from the press before the Regulations were altered, requiring the subject in question to cover the development of the three arms from 1740 to the present day. In order to meet this requirement Dr. McGuire has revised and enlarged the work to cover the period from Frederick the Great to the Boer War, and even goes as far as to include some valuable conclusions from the Man-

*"THE DEVELOPMENT OF TACTICS." By T. Miller McGuire, M. A., LL. D., Inner Temple, Barrister at Law. Hugh Rees, Ltd., London, Pubs.

churian War, as late as the battle of Kin-Chow. The Doctor's introduction is very interesting :

"The definition of tactics is simple enough and involves no subtle refinements of phrase. Tactics are the maneuvers whereby an enemy is defeated on the field of battle, or delayed during a retreat, or surprised in his cantonments, or reconnoitered in force, or driven out of houses or woods, or whereby rivers and mountains are crossed in spite of resistance. The tactician supercedes the strategist when the troops come within the range of hostile weapons.

"The theater of operations is the sphere of the strategist.
* * * The principles of strategy are eternal, to-wit: breaking a front or turning a flank, and concentration of superior force at vital points.

"The application of tactical principles depends on the modifications in weapons, their range, their striking force, their destructive power, and the greater or less quantity that can be carried on the person of the soldier, or with convenience in wagons; on sound men; on sound horses; on a lavish supply of necessaries; excessive supply if possible, as the case may be, of arrows, or javelins, or bullets or shells.

"It may be justly said that tactics should be changed every ten years if a State hopes to retain superiority; constant study, provident care, are always essential. *Peace gives a chance of being ready for the next war.*

* * * * *

"Officers cannot be improvised, and an efficient professional education for soldiers is far more valuable to individuals and to nations than is the education of lawyers or of any other class of the community."

In the opening chapter the author describes "The Details of Armament," beginning with the time of James I. and matchlocks, and leading up to our present small arms. Most of the chapter, though, is devoted to developments in field artillery, commencing with the few pieces which Frederick the Great had in his army, showing how necessity compelled him to increase this arm, until, finally, he depended largely upon it to take the place of his depleted infantry. From Frederick he goes to Napoleon, and his increased tactical employment of artillery, and the important effects produced by his concentration of the fire of this arm. Among many interesting statistics he gives the following: .

"The following comparative statistics have been given for the war of 1870-71, based on the wounded admitted to the hospitals. On the German side eighty-eight per cent. were wounded by infantry fire, five per cent. by machine guns, five per cent. by artillery, and two per cent. by swords, bayonets and lances."

The author closes his chapter on "General Details of Armament" by the appeal of Lord Roberts, fresh from his South African experiences, to the patriotism of the voters of Great Britain:

"Let me say how much I trust that the whole Nation will take the dearly bought experience of the war in South Africa to heart, and do all that is possible to encourage good shooting in the army. No other qualifications will make up for inferior shooting. However brave our men may be, however well drilled, however well set up, however well disciplined they may be, and however capable they may be of great endurance, or of riding across the most difficult country (admirable and desirable as all these qualifications are), the men will be valueless as soldiers, if they are not experts in the use of the rifle; * * * for as I have endeavored to point out, it is on skillful rifle-shooting that the efficiency of our army absolutely depends."

As examples of the development of tactics and of the gradual changes which have taken place in battle-tactics, the author describes and discusses several modern battles, beginning with Leuthen, 1757, and ending with Elandslaagte, 1899, showing a carefully prepared map in each case.

The book is more historical than original, but it contains much that is both interesting and instructive, and it deserves a place in any military library. It cannot be said that it is well arranged for a text book, but the meat is there, and the student can cull and arrange it for himself. The main criticism lies in the usual show of British egotism, wherever British troops appear, using the names of officers and organizations in the familiar war correspondent style, which should be avoided in a treatise on tactics, and especially in a text-book.

M. F. D.

**Military
Government
and
Martial Law.***

The second edition of Major W. E. Birkhimer's "Military Government and Martial Law" has just left the press of the Franklin Hudson Publishing Company, of Kansas City, Missouri.

The author, in his introduction consisting of twenty-three pages, gives the distinctions, as some understand it, between military government and martial law. He makes the greatest distinction turn upon the question whether the territory, militarily occupied, is enemy territory or loyal territory. In the first case the government exercised is military government; in the second, martial law. Without considering the premises upon which this view is based, it is sufficient to state that the author carefully preserves this distinction throughout his work. He has divided his book into two parts, corresponding to the classes of the government mentioned above, giving to military government sixteen chapters and to martial law thirteen.

In the first part the author starts at the very beginning of his subject, the power to declare war. From this rather constitutional discussion he takes the next step, the right to establish military government. Having once established this government, the first question to arise naturally is that regarding the allegiance of the inhabitants of the occupied territory. This is his third chapter, and is followed by the next, showing how far this allégiance can be compelled, which, of course, is only over that territory held by a sufficient number of troops to render the government effective.

The author then proceeds to the question of enemy territory, the right permanently to acquire the same, or to hold it temporarily. He cites cases like that of Castine, Maine, and gives the principles of conquest of the British government.

He goes into the effect of occupation on local administration, and shows the important consequences of regarding *occupied* territory as foreign. The important case of Upper

*"MILITARY GOVERNMENT AND MARTIAL LAW." By Major W. E. Birkhimer, Artillery Corps, U. S. Army. Franklin Hudson Publishing Co., Kansas City Publishers.

California in the Mexican War is treated of, and the war tariffs in connection therewith. DeLima vs. Bidwell, the Porto Rico case, is given, as well as remarks upon the occupation of Cuba by the United States. Napoleon's occupation of Spain is cleverly shown by the author to be a complete system of military government, intended to reduce the Spaniards piecemeal into subjugation, with a view to the subversion of their kingdom.

Chapter VIII. should be carefully read. It is upon the general proposition that all inhabitants of one belligerent are enemies of the other, and discusses levies en masse, guerilla warfare and war rebels. A survey of this subject, more marked for just and humane consideration, has not appeared from the pen of any writer. The guerilla banditti of the Philippine Islands and South Africa are carefully treated, and an idea of the author's broad mind and comprehensive view of his subject can best be attained by giving a few of his sentences:

"The experiences of the United States troops in the Philippines and the British in South Africa demonstrate how annoying, persistent, not to say really formidable, guerilla warfare may become even against regular troops. The fact that renders it difficult to the latter is the impossibility of telling friends from foes, or the preventing a man extending the right hand of friendship one moment, and shooting from point of vantage the next, and so indefinitely. Concentration camps are one effective instrumentality for handling the population, all beyond their borders being liable to be shot. Both in South Africa and the Philippines every practicable attention was given to the comfort of those forced to stay within the boundaries of these camps: this fact the official records show. * * *

"The extraordinary, not to say unprecedented, leniency of the United States Government in dealing with the Filipinos after all semblance of regular fighting was abandoned by the latter, and guerilla practices alone resorted to, must have surprised the civilized world. The chameleon character of these people just referred to—pretended friends one moment, enemies in ambush the next—placed them outside the pale of civilized warfare, and justified severest measures of repression. The measure of mercy toward them was filled to overflowing.

"While this was true, there were some sporadic cases of cruelty practiced upon the natives by the soldiery, in violation of the laws of war, which peremptorily forbid torture. The disposition to indulge such practices arose probably out of the diverse policies of the two parties contestant, the United States pursuing one of beneficence, even in derogation of its rights under the laws of war, the Filipinos pursuing their course of treachery and unquenchable hate in utter disregard of these laws. As that which was legitimate was not availed of to meet this course of savagery, the illegitimate crept in."

Chapter IX. is a vastly instructive one. Its title is, "Laws Obligatory Within Occupied Territory." There is a discussion of the jurisdiction of war courts, how they have been established in our past history; and cases are cited where the Supreme Court has constantly upheld the power to establish such courts and the exercise of their jurisdiction. In this chapter is the treatment of Military Commissions and Provost Courts, showing the criminal jurisdiction of the one, and the general jurisdiction of the other. The liability of camp followers to trial shows the width of military jurisdiction alone, and cases are cited to show that, however long the occupation of enemy territory may continue, the tribunals of the country can have no jurisdiction over the members of the invading army. And here, as elsewhere all through the book, cogent cases are given to the very question in point, and many of them are cited at some length.

Chapter X., on the rights regarding personal property, is long, but it exhausts the subject. The matter is brought right to the present by such cases as the following: The Dagupan Railway; the case of Doreteo Cortes of Manila; cases arising in Porto Rico. And there are references to the binding of the municipalities of Cuba to large debts.

His discussion of rights regarding public property, trade with occupied territory, and insurrections against military government, are in line with all authors of good repute. On these subjects such illustrations are given as, Smith, Bell & Co., Manila; Sulu Archipelago; Experiences in the Philippines and the policy of our government there.

We next have an important chapter on "The Responsibility of Commanders Under Military Government." This is a chapter that should be carefully studied by all of our officers. The author brings prominently into view how this responsibility on foreign soil is largely a military one; but if it be in rebel territory, or territory that likely will be annexed, political considerations enter, and the question is no longer purely a military one. He also brings out the responsibility to neutrals, and to the subjects of one's own state. He points out the analogy between a commander of enemy territory and a judge upon the bench; that both should be measured by the same rule while exercising discretionary powers. He gives the case of *Mitchell vs. Harmony*, and a careful study of this case will make clear to most officers the scope of their duties and how far they may or may not expect protection, when later called upon to justify their acts.

His last two chapters on Military Government treat of tribunals of that kind of government, and when that government ceases.

In Part II. the author gives a history of martial law under English jurisprudence, and the theory of the same in the United States. He shows how martial law supplements the common law, and justifies the nature of the necessity of it. The great question of Federal authority to institute martial law, is discussed from both executive and congressional standpoints. Numerous cases are cited of martial law in the States and Territories; how it has been administered, and through what tribunals it has been and should be promulgated.

Almost the greatest every-day, practical value of the work is in the two chapters on the "Responsibility of Commanders" and of "Subordinates under Martial Law." An officer who is thoroughly acquainted with the author's treatment of this perplexing subject, will find few cases that he will not be competent to handle. And this subject is of the highest importance to the second lieutenant, as well as to the higher commanders; for one of the lower rank may find himself with a small platoon on a side street where quick decision

and accompanying action are necessary. Every officer should have this volume in his library for the perusal of these two chapters, if for no other reason.

The appendices are well chosen and pertain to matters so constantly arising in war that the book then becomes a sort of ready reference in some particulars. As for instance, General Orders No. 100, 1863, is given and compared with the corresponding articles of The Hague Conference Code, 1899. The instructions for the government of our armies in the field, from the New Field Service Regulations, with other articles of less importance, are included.

It is not easy to understand how one can obtain as concise a statement of the subjects treated of in this volume anywhere else. A person can, by the same hard work that the author has spent upon the subject, dig out the law of military government and martial law, but he must come to the same conclusions as does the writer, after an immensity of labor. In writing this book, Major Birkhimer has done the army a great service, in an able manner, and attentive study of his work will make officers so familiar with their duties that people hereafter will not have occasion to look upon martial law as the *bête noire* of all that is terrible and unholy.

J. F. BELL.

Brigadier General, U. S. A.

Military Studies.* The eighth volume of the International Military Series consists of five military studies by Frederic Louis Huidekoper. The subject of the first study is, "Did Grouchy by disobedience of orders cause the defeat of Napoleon at Waterloo?" The second is a study of the oblique attack, in which the battles of Kolin, Rossbach, Gravelotte, and Leuthen are compared. The third is a comparative study of Jena and Mars la Tour. The subject of the fourth is "Napoleonic Strategy," and of the fifth is "The Campaign of Eckmühl."

All these studies, except the first, which was published

*"MILITARY STUDIES." By Frederic Louis Huidekoper. Franklin Hudson Publishing Company, Kansas City, Publishers.

in the *United Service Magazine*, have been published at different periods in the *Journal of the Military Service Institution*. They are valuable contributions to the military literature of recent times; and especially is this true of the studies on "Napoleonic Strategy" and "The Campaign of Eckmühl," which show great diligence and research.

The reader will find that these studies cannot be read and digested at a sitting; to be fully appreciated they must be studied with diligence and care, and the movements must be carefully followed on the maps. When read in this way, the book will be found most instructive to the military student.

In the preface the author says:

"The writer realizes thoroughly the force of the argument with which he has so often been confronted, as to the uselessness of modeling the tactics of to-day upon those of commanders of the past, however great; but although the improvements in ordnance, transportation and other increasing facilities are constantly modifying tactics, no one has yet succeeded in refuting the maxim that the fundamental principles of strategy always have been and always will be immutable. Moreover, there is not the slightest doubt that every officer, however well versed otherwise in military science, can draw much valuable information from a careful and exhaustive study of the campaigns of such generals as Napoleon, Frederick the Great and Von Moltke. 'It does not take long for contemporary pigmies to hide the giants of time past; the old horizon of renown is ever covered by thicker mists, and only a few colossal figures remain uneffaced.'"

These words are timely, for of late there has been a tendency among a few military students, who have made but a superficial study of the subject of strategy, to arrive at the conclusion that the principles are not unchangeable. Or, as they put it, that there are no principles of strategy, simply rules which are constantly being modified and changed. Increased efficiency of modern firearms, greater facilities for the movements of troops, and improvements in methods of dispatching orders have made so many maneuvers impossible in the present day which were possible in the past, and so many possible in the present day which were impossible in

the past, that upon first thought even some able students of military matters have been slightly led astray, and have hastily come to the conclusion that the principles of strategy are constantly undergoing a change. As a matter of fact "the fundamental principles of strategy always have been and always will be immutable." Inventions and discoveries have changed the methods of carrying out these principles, but the principles themselves are unchangeable. Taking advantage of wireless telegraphy, a general or admiral may to day find it a great deal easier to frustrate his enemy and concentrate his forces upon the vital spot of the theater of operations, or may, by reason of his enemy's being able to take advantage of this new discovery, find it much more difficult to execute these maneuvers; but the principle of a concentration of forces—of bringing a stronger force upon the battlefield—is as necessary and true to-day as in the days of the great Napoleon. "The fundamental principle," says Jomini, "upon which every military combination rests, is to operate with the greatest mass of our forces, a combined effort, upon a decisive point." Clearly this principle is true for all time, and applicable alike to armies and navies.

Mr. Huidekoper's study on "Napoleonic Strategy" is the best summary of the subject in the English language; probably the best in any language. No one can read this chapter without being impressed by his clear insight into Napoleonic methods.

After a thorough study of Napoleon's campaigns, the author thus sums up the essential principles of strategy which must be observed:

- "1. To keep one's forces united.
- "2. Not to be vulnerable on any point.
- "3. To move with rapidity on important points.
- "4. To give one's self every chance possible to assure victory on the battlefield by there uniting all one's forces."

The author adds:

"These essential principles Napoleon applied to his own campaigns, which are remarkable for five important charac-

in the *United States* different periods of *history*. They are the literature of *republican* studies on "*Eckmühl*," v

The *results* and digested be studied be carefully the book student

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The study of Napoleon's campaigns always has been and always will be most instructive; for take him all in all, he was the greatest master of war that the world has ever known, possibly the greatest that the world will ever know. "The series of Napoleon's successes," says Professor Seeley, "is absolutely the most marvelous in history. No one can question that he leaves far behind him the Turennes, Marlboroughs and Fredericks; but when we bring up for comparison an Alexander, a Hannibal, a Cæsar, a Charles, we find in the single point of marvelousness Napoleon surpassing them all." "Napoleon," says Colonel Dodge, "collated the knowledge of war which existed in his youth, and out of

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"In six days after arriving at Donauwörth, Napoleon had extracted his troops threatened with disaster, brought order out of chaos, withdrawn Davout from his dangerous isolation, concentrated on his own center, separated and driven the Austrian left back to the Inn, gained possession of the enemy's communications, and had defeated the Archduke and forced him across the Danube. In three days he had fought three successful pitched battles and had killed, wounded or captured more than 24,000 men. This 'Five Day's Campaign' is unique in history—alone it would have sufficed to immortalize such consummate genius, for never was success more brilliant or decisive and never was it better deserved. In his dying days at St. Helena the Emperor recurred with constant pride to the strategy of Eckmühl; and in his own commentaries declared that 'The battle of Abens- burg, the maneuvers of Landshut, and the battle of Eck- mühl were the most brilliant and the ablest maneuvers of Napoleon.'"

brought so perfect a system, that he is the not surpassed by any other general from all modern soldiers since his day. 'The War' says Lord, "a military prodigy equally great in arms and strategy, a master of all the improvements which had been made in the art of war, from Epaminondas to Frederick II."

What a career! First, the wonderful Italian campaign, which, in brilliancy of strategical combinations and marvellousness of results, surpasses every other campaign in the world's history; then the Egyptian campaign, where Bonaparte came within a hair's breadth of founding a mighty empire; then the campaign of Marengo, where for a moment his star seemed about to set in darkness, then like a flash rose again in its former splendor; then that gigantic war with England, which, before it terminated, involved nearly the whole of Europe in deadly conflict and shook the very foundations of Continental governments. During this mighty conflict, which began with the projected invasion of England and ended with Napoleon's final defeat at Waterloo, the armies of Austria, Prussia, Russia, and Spain were conquered, nations were crushed, thrones were crumbled, coalition after coalition melted away before the attacks of this matchless warrior's victorious troops; and states, provinces, and cities were added to the French Empire, until, finally, at Friedland, he reached the height of his power, and ruled directly or indirectly over the greater part of Continental Europe. Then came his reverses; the campaign of Russia, the battle of Leipzig, the abdication and exile to Elba, and the return to France, where for a brief period his genius again blazed forth with its former splendor; then the final acts of the great drama—his fall on the fated field of Waterloo—his banishment to the rock of St. Helena.

What a stormy career was his! His life was almost a continuous battle. Even his death took place during a fierce storm, that beat tempestuously upon the rocky shores of that lone island; and in the delirium of the approaching end, amidst the shock of the billows and the battle-like roar of the waves, the great captain imagined himself once again at the head of his army in fierce conflict on the tumultuous battlefields of his earlier days.

H. H. S.

teristics, viz.: 1. *The initiative at the commencement of hostilities*; 2. *One line of operations*; 3. *The unity of the forces*; 4. *The rapidity of movement on decisive points*; and 5. *The concentration before battle.*"

In the last paragraph of the book the results of the campaign of Eckmühl are thus vividly summed up:

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it wrought so perfect a system, that he is the one captain whom all modern soldiers strive to copy." "He was," says Lord, "a military prodigy equally great in tactics and strategy, a master of all the improvements which had been made in the art of war, from Epaminondas to Frederick II."

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H. H. S.



A FILIPINO PROCLAMATION.

The following is the translation of a proclamation found by Captain Hartman, First Cavalry, with other insurgent documents in an old sugar mill near Bauan, Luzon. It is given as a sample of the kind of war news the inhabitants of the Islands were furnished by the insurgent authorities :

“Be it known to everybody that this telegram was received this morning, and reads as follows :

“Saturday and Sunday, the 4th and 5th of the present month, a battle took place, and there were killed on our side less than two thousand individuals, including those who were in the Church of Paco.

“On Monday our President descended upon Caloocan, and in the battle which took place there, three hundred Americans were killed, and we captured one general and seven hundred of his soldiers.

“On Tuesday we cut them off and our illustrious chief of operations, Señor Montenegro, took about four hundred Americans and one general as prisoners.

“On Thursday we captured one general, and many Americans were killed.

“On Saturday at Parañaque a fight took place, and nearly all of the advance guard of the Americans were killed, and afterwards they bombarded Parañaque. Since Thursday they have also bombarded Caloocan and Navotas, but the Germans intervened, and now tranquillity reigns supreme in the suburbs of Manila. General Otis has implored for the suspension of hostilities and for the termination of the war through diplomatic means ; the answer of our illustrious President, Señor Aguinaldo, was that the question must be decided through war, as it had commenced with war.

“BATANGAS, February 13, 1899.”

BILL TO PROMOTE THE EFFICIENCY OF THE ARMY.

A proposed bill has been received from an officer of the cavalry service, and is presented in the pages of the JOURNAL with the hope that it may be discussed in later issues by other officers. It is hard to see how such a measure could

be objected to by any officer who believes himself physically equal to the duties of his office; and any conscientious officer who does not believe himself equal to his duties should welcome his retirement from active service.

The bill is as follows :

"1. In addition to the examinations now required by law for the promotion of officers, every officer in the line of the Regular Army, above the rank of captain, before each and every promotion, shall be physically examined by a Board of Medical Officers of the Regular Army, and if found permanently disabled for active field service, he shall be promoted, and at once transferred to the Unlimited Retired List.

"2. Before being ordered upon active field duty, and also on the prospect of war, every officer, above the rank of lieutenant-colonel, shall be physically examined by a Board of Medical Officers of the Regular Army, and if found permanently disabled for active service, he shall be at once transferred to the Unlimited Retired List.

"3. During peace, every officer of the line of the army, above the rank of lieutenant-colonel, shall be physically examined, at least once each year, preferably before June 30th, by a Board of Medical Officers of the Regular Army, and if found to be permanently disabled for active field service, shall be at once transferred to the Unlimited Retired List.

"4. All officers above the rank of lieutenant-colonel, now on the Retired List, shall be transferred to the Unlimited Retired List, and all officers hereafter retired, shall, if of higher rank than that of lieutenant-colonel, be placed on the Unlimited Retired List."

ARGUMENT.

After officers of our army reach the grade of major, they are no longer subject to examinations. As they have passed many previous mental examinations, it is presumed that they are mentally competent. The same rule will not apply when it becomes a question of physical ability.

Officers of the junior grades in our army are young men in the robust period of manhood, and are subject to few physical changes. In the higher grades, the officers, as a rule, are of more advanced years, and therefore more liable to physical changes; and yet we have the anomaly of requiring young officers to be physically examined for every

promotion, and dispensing with such examination for all officers above the grade of captain. The evils resulting from our present system are well known.

It is believed that these would be corrected by the above bill.

A CHIEF OF CAVALRY.

To the Editor of the Journal:

Recent events have had a disturbing effect on the cavalry service. The persistent talk about reduction, which has been kept up for the last two years, has probably been more demoralizing to the cavalry than a lost battle would have been. When a man sees his prospects for promotion set aside, and all his hopes and ambitions blown lightly away, he feels all the bitterness of defeat. The effect of this agitation is extended to those who enter the service from outside. For two years no one has entered the cavalry without listening to the dismal prognostications of his best friends. Under the circumstances, it takes as much courage for a cadet at West Point to apply for cavalry, as it does to lead a forlorn hope. Moreover, we are not permitted to think that all this smoke does not mean a big blaze somewhere; for we are told that the matter has been seriously considered by the President, by the Secretary of War, the Chief of Staff, the General Staff, and by the Committees of Congress.

While the discussion goes gaily on, it is a remarkable fact that most of the other arms of the military and naval services have been able to show that increase and not reduction was absolutely necessary for them. As instances of this, look at the bills for increase of one kind or another, either approved or already accomplished, in the case of Marines, Blue-jackets, Medical Department, Signal Corps, Engineers, Puerto Rican Troops, Philippine Scouts, Chaplains, Ordnance and Coast Artillery. Apparently the delay in completing all of these changes is due to the fact, that the reduction of the cavalry seems to claim first consideration.

The dental surgeons and the infantry, I believe, alone retain their *status quo*.

And in the midst of it all, the cavalry has not been heard. Without a recognized head or a spokesman who is qualified to speak, it is "the buffet of the idle tongue," and on fortune's cap the broken feather. A number of cavalry officers have written letters to members of the Executive Council of the Cavalry Association, suggesting that something should be done. Truly something should be done, and correct it is that the CAVALRY JOURNAL is the proper medium for the exchange of views; but the JOURNAL is the servant of the Association and not qualified to speak on matters of policy. The JOURNAL is patiently waiting for members to speak for themselves, and take a hand in this matter of army organization.

It is almost unnecessary to recall that beneficial changes in military and naval matters never come without discussion and agitation for years. It was ten years before the infantry got their three-battalion organization; the question of a General Staff was agitated for a longer time; examination for promotion and lineal instead of regimental promotion were all the results of years of discussion in the service papers.

Unquestionably the first idea of those who recommend and make the laws is to provide an efficient army in all its branches, and they will not knowingly discriminate against any particular arm. But in the absence of full information and well digested schemes, there is always danger that propositions may find favor which have not been sufficiently studied and discussed. In military matters we have not always been guided by the light of experience, as witness the almost total elimination of cavalry from our army for fifty years following the Revolutionary War; the dismounting of the cavalry immediately after the experiments with militia in the Florida War; the absence of cavalry in the Federal Armies in the first years of the Civil War.

If there are any good reasons why the cavalry of the U. S. Army should remain as it is, be increased, reduced, changed

in organization or otherwise, it is a good time to bring it out. I for one suggest that we need a CHIEF OF CAVALRY.

VELOX.

To the Editor of the Cavalry Journal:

The January number of the JOURNAL contained a short article styled "Our Cavalry an Orphan," which seems to me to be very much to the point. Our cavalry is not all that it should be; even its most zealous advocates would be glad to see it accomplish more than it does; but to do this will require more uniformity and particularly more opportunity.

The War Department issues general orders prescribing certain months for drill and field exercises, others for target practice, and still others for theoretical instruction and school work. To the post commander is left the execution of these orders, and upon his initiative will depend almost entirely the thoroughness of the instruction and the efficiency of the troops.

The cavalry is inspected probably twice a year, as are other troops—once by the Division Inspector, and once by the Department Commander. Each makes his notes, which are embodied in his report of what he has seen. Here the matter generally rests. There is no comparison of the reports on the work of the cavalry in the Department of Texas with the reports of that in the Department of Dakota, or any other Department. The divergence in these reports may be ever so great as to mounts, equipment, instruction, enthusiasm and efficiency; yet there is no one to detect it. The Chief of Staff cannot possibly give his attention to such details.

A Chief of Cavalry is the one to whom these reports should be rendered, or better still, the one who should make the inspections. If the Department Commander and the Division Inspector happen both to be infantry or artillery officers, their criticism on the cavalry must of necessity be based on rather limited experience.

But the need of a Chief of Cavalry is not demonstrated in the lack of uniformity nearly so much as in the lack of opportunity. Before the artillery had a Chief, no doubt there

was great divergence in equipment and instruction, but that was insignificant as compared with the lack of attention and general neglect of the whole arm of service.

This is just what we are laboring under in the cavalry to-day—neglect. Inspectors, even the highest in rank, make favorable reports if arms and equipments are bright, horses fairly manageable, lines well preserved in marching in review, and advance-guards promptly thrown out. Add to this a few “stunts” in the riding hall, and the cavalry is all that it is expected to be.

Let us stop and consider what would be required of the cavalry in case of war. The first and simplest duty would be for a troop here and there as mounted escort for general officers and mounted orderlies. The second duty would be for squadrons and regiments to scout and reconnoiter two or three days in advance of the armies, or for one or two hundred miles over a border; or to threaten the enemy's communications miles in their rear; or to proceed on special missions, such as the destruction of arsenals, mills, storehouses, bridges, dams, locks, etc. Once in contact with the enemy, the third duty would be to fight advance-guard or rear-guard actions, charge the enemy's cavalry, or dismount and take its place in the line of battle.

The first of these duties is insignificant and unimportant.

The third is highly important, but our drills, target-practice and maneuvers fit us for it as well as can be in time of peace.

It is the second of these duties which constitutes the essential cavalry work; that which no other arm of service can perform. It is the one to which we should give most attention, and yet is the one in which, from lack of opportunity, we are most deficient.

Had we a Chief of Cavalry, how long would it be before he would make opportunity for this training? Such a thing would not be difficult of accomplishment. Many of our cavalry posts are close enough together to enable the cavalry from one to operate against that from another. Such is the case with Forts Riley and Leavenworth, Robinson and Meade, Clark and Sam Houston, Jefferson Barracks and Sill, Assinni-

boine and Keogh, Sheridan and Des Moines, Presidio of San Francisco and Presidio of Monterey. At isolated posts, like Ethan Allen and Chickamauga, a squadron could go out one hundred miles and operate back against another squadron.

This class of work would develop the true cavalry spirit in both officers and men, work of which the cavalry might be and should be proud. Few of us who have entered the cavalry within the last twenty years have ever had the opportunity to do any strictly cavalry work of which we can be proud. *Esprit de corps* must diminish, if it has nothing on which to thrive.

Give us a Chief of Cavalry who will know every regiment, and every officer in it; who by dint of his own enthusiasm will inspire others with more cavalry spirit; whose inspections will be thorough and searching, and at which every officer will quail if he is not up to the required standard; who will know whether every officer owns his own horse, and what kind of a horse it is; who will know the kind of a cavalry horse we should have, and see that we get it; who will condemn those and only those, that are unfit for service; who will see that we get at least six weeks of field service every fall, exclusive of maneuvers.

In going into the field for the duties specified under the second class, the cavalry should go light, without wagons or even pack-train. Each officer and man should carry an extra blanket and a change of clothing on his horse. The squadron quartermaster and commissary should be provided with enough cash so that he could purchase forage. Settled as our country is now, this will be possible once in twenty-four hours. Fresh beef and bread should also be purchased; the other components of the ration could be bought or carried, or both, *i. e.*, buy five days' supply at a time. We have in our saddle-bags nice little sacks, supposedly made for carrying sugar, coffee or salt; but who ever heard of a man's using one of them? Such things as this should remind us not of what we are doing, but what we are not doing. The squadron quartermaster and commissary should be given the cash (not blank vouchers) for making purchases; it will unquestionably be found that he can purchase in the field at less

than contract price at the post, the producer having no commission or freight to pay. Blank government vouchers are below par with the countryman who has never seen one before. This is the method of supply that should be adopted in time of war, and it should therefore be used in time of peace.

The field exercises of the squadrons and regiments should be prepared by department commanders. Squadron and troop commanders would learn how to scout the country for an enemy, and having found him, how to keep the contact; men, when a couple of miles from their troop, would acquire confidence, and not feel themselves lost and more concerned about getting back than about carrying out their orders. Men would learn how to use and care for their horses under field conditions. Squadrons of cavalry that had been in the field for a month or six weeks, as above, would feel like veterans; by the time they had had this field service for three years they would be so valuable to the country that no one would talk of cutting down our cavalry; they would say: "They are so good we cannot afford to let them go; let's keep them all."

MALVERN-HILL BARNUM,
Captain and Q. M. Eighth Cavalry.

PROMOTION BY ELIMINATION AND A RESERVE LIST.

The discussion of the question of promotion by another method than seniority, long the rule in our service, is becoming so animated that it is quite evident this important matter is receiving careful consideration from our officers, and it is hoped that the various suggestions will ultimately crystallize into a definite form acceptable to the majority of those most interested.

It cannot be doubted that the "selectionists" are in the minority—not that our officers are opposed to the principle of selection, but they fear that its application cannot be freed from the suspicion of injustice in the form of pull, politics or propinquity, for which reason the "eliminationists" preponderate.

Is a radical change necessary? The present plan of promotion was a step in the right direction, and went as far as at the time (1890) seemed advisable; but it now needs developing to accomplish the best results, which is *the retention on the active list of the most efficient officers only, and their promotion by seniority.*

The criticism on the execution of the existing law is that it does not eliminate any considerable percentage of officers, and leads to the unwarrantable inference that we are practically all up to the highest standards of mental, moral and physical efficiency.

While it is undoubtedly the fact that a large majority of our officers are above criticism, there are some instances in which it is not so, for which the army itself is responsible, since the law requiring examinations for promotion gives into our own hands the almost *absolute control of the character of our personnel.* It is true that we occasionally hear of the overruling of the recommendations of examining boards; but these are rare exceptions to the general rule of their approval, and it may be safely assumed that the examining boards determine the standard of military efficiency in our service.

If this is the case, are such boards so organized and conducted as to determine fully, in every instance, whether the candidate for entrance or promotion be mentally, morally and physically fit? We believe it is the opinion of the majority of officers that such is not the case.

It goes without saying that all examinations in each grade should be of equal severity—and hence it follows that all questions should be prepared at a central bureau—and the answers marked there. The details of the physical and practical examinations should also be sent to this central bureau and graded, and there, too, the record should be weighed. This has not heretofore been the case. The plan outlined is not novel, and its long use in the examinations for admission to the Military Academy has demonstrated its efficiency.

No matter how conscientious the members of examining boards may have been, there are certain influences that have

had considerable weight in determining their findings. Among these may be mentioned comradery, family or other personal considerations, and last but not least, an unconscious recognition of a vested right, increasing with length of service, which an officer is supposed to acquire, entitling him to retirement with pay. This undoubtedly becomes a very important consideration when a board has to decide whether or not a brother officer is to be wholly separated from the service.

From the foregoing it logically follows that if the system of examinations for promotion is perfected and extended, local influences eliminated, and the right of the officer to a proportional share in his retired pay (which is in a sense detained pay) recognized, there is no reason why the unfit should not be made to "mark time," and the fit be advanced with but little change in present methods.

So much for the officer, but what of the government and the service? As a matter of fact the "unfit" for advancement might be very fit to perform certain military duties. It does not always follow that a good captain will make a good colonel, and there may be plenty of work for him to do as a captain, which there is no reason why he should not continue to do quite as well after as before being jumped by a junior who has shown himself fit for the higher grade. The officer who fails to pass his examination for promotion should be placed on a "reserve list," to be created by legislation, a waiting list where his "waiting pay" would be comparatively small, depending upon grade and length of service. From this list he might be assigned to such duty as he is considered capable of performing, and, while on this duty, his pay and emoluments should be those of his grade in active service.

In addition to the officers who have failed to pass the prescribed examination tests, the following classes should be included in the proposed "reserve list:"

- 1st. Those now on the "limited" retired list.
- 2d. All officers under sixty four years of age who in future shall be found unfit for active service by reason of physical disability originating in the line of duty.

3d. All officers who have reached a prescribed age while serving in any grade, say fifty-five years for lieutenant-colonels, fifty for majors, forty-five for captains and forty for lieutenants.

The "retired" list will thus consist of those officers only who have passed the limit of sixty-four years of age, and be in reality what the name indicates, a list of superannuated officers incapable of performing any kind of military duty.

The subject of graded retirement for age we believe to be beyond the stage of discussion; that it is desirable for our service is not to be doubted; that it is practicable is proved by long experience of it in other armies. That younger officers in the higher grades are deemed necessary in our service, is evidenced by the fact that special inducements to retire have been offered the older officers.

It must be borne in mind that all officers who go on the proposed reserve list are not lost to the service, for many of them can satisfactorily perform some of the duties now being done by officers on the active list, whose much needed services could thus be secured to the troops from which they are detached.

The foregoing scheme might be epitomized as follows:

That the President be and he is hereby authorized to prescribe a system of examinations of all officers of the Army below the rank of *colonel*, to determine their fitness for promotion, etc.

That the "limited retired list" shall hereafter be designated the "*reserve list*," upon which, in addition to those now prescribed by law, shall be placed all officers who fail of promotion by reason of failure in the prescribed examinations, or who have reached the age of forty years while serving in the grade of lieutenant, forty-five years in the grade of captain, fifty years in the grade of major, or fifty-five years in the grade of lieutenant-colonel; *provided*, that the pay of officers of the reserve shall be determined by grade and length of service, except in case of disability, say three-quarters pay for over thirty years' service, decreasing proportionately to one-quarter for under five years; *and pro-*

vided, further, that when an officer of the reserve is actually employed in the military service, he shall receive the full pay and allowances of his grade.

STAGNATION IN OUR CAVALRY.

An arm of the military service in which there is no promotion of its officers, or in which promotion lags behind that of all the other arms, is an arm without *esprit* or interest, and soon must become inefficient. Rank, promotion, is all that an officer has to hope for; it is what he gives his life for; it is the only reward he asks of his countrymen. If the hope of it is taken away from him, his ambition and usefulness must go too. And this, apparently, is the prospect of our cavalry to-day. It is already behind every other branch of the service in the relation which promotion and rank bear to age and length of service.

It is coming to be recognized even by the unprofessional that the chief object of our maintaining a standing army in time of peace is to educate and train officers against a time of war. The advantage, the economy, of having trained officers to organize volunteer regiments and prepare them for campaign in case of emergency could have no stronger argument, no more convincing proof, than the excellence of our late volunteer regiments, as compared with any other volunteer regiments ever organized and put into the field in the same length of time in this or in any other country. But to furnish trained officers for these volunteer regiments, and for the numerous temporary staff positions and other detached duty, the regular regiments had almost to be stripped of their officers. The Register shows that 119 regular cavalry officers were appointed to volunteer commissions during the years 1898 and 1899. It was even worse in the Civil War. A regular cavalry regiment in that war which had a field officer to command it was in remarkably good luck. The regular cavalry regiments were usually commanded by captains; sometimes by lieutenants.

It is well known that we have not enough officers properly to perform the routine duties of the service even at the

present time of profound peace. Not a squadron in the service has its complement of officers present for duty with it. A squadron recently returned from the Philippines and reported for duty at Fort Riley under the command of a lieutenant.

The present organization of our cavalry has nothing to commend it. A squadron of four troops, which at war strength would mean 400 troopers, is too large for any single man to command as a tactical unit. Yet the squadron is the tactical unit of cavalry. In every service except our own the squadron contains from 120 to 150 troopers. This is the squadron organization recognized as the best by all of the world's best cavalry soldiers. Ours alone contains 400 troopers. No reason is known to have existed for the adoption of our organization of four-troop squadrons, unless it was the desire to assimilate it to the infantry organization. This will also account for the designation "battalion" which we find in our old "Cavalry Tactics."

We know by our own experience that this is a clumsy organization. For all work at our maneuvers the cavalry regiments are divided into detachments of two troops, instead of squadrons of four troops. Such a detachment is usually commanded by the senior captain present with it, who must turn his own troop over to his lieutenant or sergeant—an arrangement never satisfactory. Best results are always obtained when every officer commands the unit assigned by the law to his rank; and the proper rank for the commander of two troops, which the world over form a squadron, is that of major.

The proportion of commissioned officers to enlisted men is smaller in our cavalry than it is in any other cavalry in the world; and the proportion of officers on detached service is, and of necessity must always be, greater than that of any other cavalry in the world.

Likewise our cavalry regiment of 1,200 troopers corresponds to a brigade or a division in every other army, of at least two regiments. Twelve hundred mounted men are too many for any living man to command, in any formation, by word of mouth, our drill-book to the contrary notwithstanding.

ing. Our cavalry regiments, for tactical reasons, ought to be divided into two half-regiments, each under the command of a lieutenant colonel, and each consisting of two or three squadrons. Each half-regiment would correspond to a full regiment in other services. This organization would also give the lieutenant-colonels a unit to command—a reason for being—instead of leaving them, as at present, the only regimental officers without a fixed tactical duty—a veritable fifth wheel.

Under every consideration, then, we need a larger proportion of officers in our cavalry. To enumerate the reasons again, and in their order of importance:

1. We need the hope of promotion, and we must have it if we are to maintain our high standard of *esprit* and usefulness. Without it dry-rot will set in soon or late. We are only human, and the people of the country cannot, and do not expect the highest class of service to continue without commensurate reward of rank; and if properly appealed to, and made to understand the condition, the Congress will see to it that we are adequately compensated for our services. The people want the best servants, and they know that they cannot hope to get the best servants at the worst price.

2. In time of war trained officers, and many of them, are what we need; and they must be trained beforehand, in time of peace, in the army. The number of officers in this training school should be greater than is required for the actual duties of peace, rather than smaller as it is to-day.

3. The tactical organization of our cavalry regiments is wrong, and is not approved by our own experience or that of any other nation. If we cannot have squadrons of two troops, the next best organization is with squadrons of three troops—four squadrons to the regiment. Indeed a squadron of three troops, each of sixty-four troopers in the rank, is a very symmetrical and easily handled unit. And a half-regiment composed of two such squadrons would be as large a command of cavalry as any man could command directly.

Such an organization would double the present number of our lieutenant-colonels, increase the present number of

our majors by one-third, and add a few more to the list of our first and second lieutenants.

DIRTY OATS.

Civilians, especially those from cities, coming for the first time into an army post are always struck with our lack of what are called "modern improvements." They wonder why the Government will allow us to go on living in its houses and hazarding their destruction with kerosene lamps, when small country towns have long ago adopted electricity or acetylene gas. They want to know why our quarters are encumbered with unsafe and ineffective heating stoves when furnaces and steam heaters are so much cheaper in the long run. They ask us why we ride with a single rein and curb-bit, when horsemen the world over use a double rein. They have asked within the last twelvemonth why we were wearing "congress gaiters" which they saw their grandfathers wear.

A right observing one in an hour's walk round a big frontier post, will ask a hundred such questions; to answer which always embarrasses and humiliates us. We reply that we are aware that such things are behind the times—that we have read about electric lights and steam heaters and other up-to-date things. We point with special pride, *esprit de corps*, to the army posts that are provided with such blessings. For there are some. Five years ago we could not have named a post lighted with electricity. But things have changed—men have changed; and to-day we answer our civilian friends, "Just you wait! We shall have all those things some day. Our turn will come. Give the Departments time."

But it is not only the premier-de-siècle man from town that asks impertinent questions about our lack of modern improvements—the man from the farm also misses those that he is familiar with. Not a thrifty farmer in all the great West feeds dirty oats to his horses. Every well equipped barn, nowadays, is provided with some sort of automatic oat cleaner; and every stable in the service, whether

of troop, battery or quartermaster's department, ought also to have one.

Many months ago several such cleaners were sent to Fort Leavenworth for trial, by the Kaspar Oats Cleaner Co., of Chicago; were set up in the battery and troop stables; were found satisfactory; were favorably reported upon and recommended by a board of officers, and were —. Have any of them been supplied for the stables throughout the service, or are our horses still eating weed seeds and dirt with their oats?

This is a matter for troop and battery commanders to inquire into.

THE INADEQUATE RANK OF OUR HIGHER COMMANDERS.

One of the hardest questions logically and satisfactorily to answer in connection with the organization of the armies of the United States, is, Why have our higher officers seldom, or never, been given by law rank commensurate with their commands or duties?

Since the very beginning, 1775, there have been only four full generals in our service, Washington, Grant, Sherman and Sheridan. There have been only eight lieutenant-generals. General Scott, who commanded the army in two wars, and for a longer time than any other man, was never more than a *brevet* lieutenant general.

The rank proper for the commander of each unit of troops, and the corresponding territorial district, in descending scale, is so well known that it hardly seems worth while to mention it. Any American knows that a separate army should be commanded by a general, an army corps by a lieutenant-general, a division by a major-general, and a brigade by a brigadier-general. Yet after General Scott's retirement, the rank of major-general was the highest in the U. S. Army, until General Grant was made lieutenant-general by special act of Congress.

Not so in the Confederate Army. There we find every separate army commanded by a full general, and the army

corps commanded by lieutenant-generals. In the short four years of this army's existence, seven full generals and eighteen lieutenant generals were commissioned. In this particular, as in nearly every other, the organization of the Southern forces was better and more business-like than that of the Union forces. And one can hardly read the history of those campaigns without being persuaded that many of the failures on the Union side were due to the inadequate rank of the commanders in the field, and to the consequent frequent shifting and changing, which might have been avoided had proper rank, fixed by law, obtained from the outset.

Several of the Union commanders that were deposed after a single failure, might have succeeded if given another chance. Generals learn by their own mistakes. Lee was a far better general after a year at the head of an army than he was in the beginning.

But with the lessons of five wars before them, the people and their representatives in Congress must have some good reason for withholding from our higher commanders their proper rank and titles. It certainly cannot be a question of economy, for the additional expense would be too insignificant for consideration. Can it be the lingering shadow of that superannuated bogey, fear of a military supremacy? If any trace of that shadow can have lasted after the quiet dispersion of the hosts of soldiers at the close of the Civil War, it must have faded out under the light of the twentieth century. Many of the fears and apprehensions of our Revolutionary fathers seem no more than ghosts of the nursery after the passing of a century.

Our Army to-day contains 60,000 men, two full army corps, spread over a wider territory than that occupied by any other army in the world except the British. From every point of view considered, its highest officer, the Chief of Staff, should have the rank of general, and to command the two corps there should be two lieutenant-generals. This would give the Army the proper organization to serve as a nucleus in case of war, and might prevent a repetition of some of the chaos we witnessed in the haphazard mobilization of 1898.



Publisher's Notices.

ON BEHALF OF OUR ADVERTISERS.

The Publisher's Department of the JOURNAL appeals to subscribers, and especially to members of the Cavalry Association, on behalf of its advertising patrons. In order that the JOURNAL shall maintain a high standard and constantly improve in get-up and appearance, it must have the patronage of advertisers. The amount of the dues of members and subscriptions would in no wise defray the expenses of the Cavalry Association and the publication of the JOURNAL. Most of the best firms of the country, those whose wares are of use to the Army, will be found in our advertisement pages; and if all who are interested in the success of the JOURNAL—and certainly all members of the Cavalry Association are—will make it a rule always to look first in its advertisement pages when they purpose purchasing anything, they will generally find what they want; and they will aid the JOURNAL by patronizing its business friends. The management would, also, be obliged, if all who deal with the JOURNAL's patrons would mention the JOURNAL in their orders.

BLICKENSDERFER—UNDERWOOD.

Take your choice. We have tried them both and know their worth. The army officer nowadays that does not own and use a writing-machine is not of the twentieth century. Life is too short to spend in writing any paper in duplicate or triplicate with a pen, and in reading over each of the three copies to make sure it is all right. With both the Underwood and the Blickensderfer the printing is before the eye as each letter is made; and they are equal in every other respect to the best machines on the market.

MOET & CHANDON.

Interesting statistics: The following table of importations of the principal brands of champagne that arrived at the port of New York during the year 1904 should be of considerable interest to lovers of the sparkling wine:

Moet & Chandon.....	116,549 cases	Piper-Heidsieck.....	9,136 cases
G. H. Mumm & Co.....	85,228 "	Louis Roederer.....	6,990 "
Pommery & Greno.....	24,143 "	Pol Roger.....	6,603 "
Ruinnart pere & fils.....	15,822 "	Dry Monopole.....	2,932 "
Vve. Clicquot.....	13,076 "		

Tabulated according to Custom House Statistics by Bonfort's Wine and Spirit Circular, January 10, 1905.—Adv.

THE MEHLBACH SADDLE CO.

This reliable firm is still the only one that carries the "Whitman" saddle, so well known in the Army. And now that the "Whitman" is the authorized and recognized saddle for all field, staff and general officers, and all officers hope soon or late to get into one or another of these elect classes, it behooves every officer to own a Whitman and learn to ride it. A man that can ride a Whitman can ride a McClellan, but the reverse is not true.

POLISHINE.

Polishine is still without an equal in its line. It received the highest award at the World's Fair, and was used there in all the departments. It is a great labor-saver for soldiers, and ought to be found in every Post Exchange.

CHATTANOOGA FIRMS.

Among our new advertising patrons will be found several Chattanooga firms. We have taken pains to solicit the patronage of the most trustworthy houses of that thriving city, and have accepted contracts with none that we do not feel we can recommend to our members and subscribers. The names will be found in our pages, of the firms that the Seventh Cavalry have found worthy of their patronage during their service at Fort Oglethorpe, and we confidently commend them to the officers and men of the new regiment

soon to take station at Fort Oglethorpe. The "ads." of these following Chattanooga firms will be found in our pages:

A. Muxen & Co.;
D. R. Loveman & Co.;
G. W. Meyers Jewelry Co.;
Davidson Clothing Co.;
Tom Fritts Hardware Co.;
J. W. Kelly & Co.;
Wallace Buggy Co.;
F. M. Catron.

DES MOINES MERCHANTS.

We solicit the patronage of all good cavalrymen and their families at Fort Des Moines for the following excellent and reliable firms, whose "ads" will be found in our pages:

Garver Hardware Co.;
Chase Brothers;
Wright, The Haberdasher;
C. C. Taft & Co.

SAN FRANCISCO HOUSES.

Among our new San Francisco patrons will be found the following:

Baker & Hamilton;
Leibold Harness Co.;
Yates & Co.
Greenebaum, Weil & Michels.

We commend them not only to the patronage of our friends stationed permanently at the Presidio, but also to the large number of those who stop there for a day or two on their way to and from the Islands.

ALFRED J. CAMMEYER.

Cammeyer's shoes are so well known that it almost seems like an act of mere good will on the part of Mr. Cammeyer to advertise in the JOURNAL. We hope that any friends of the JOURNAL who do not already wear Cammeyer's shoes will begin to wear them—we hope so, more on their own account than on Cammeyer's. Any Post Exchange that does not carry Cammeyer's shoes is behind the century.



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